

Application No.: 19-04-016
Exhibit No.: SCE-01
Witnesses: A. Hernandez
J. Yuen
M. Freeman
E. Little
M. Sheriff
R. Thomas



SOUTHERN CALIFORNIA
EDISON[®]

An *EDISON INTERNATIONAL*[®] Company

(U 338-E)

***Testimony of Southern California Edison Company
(U 338-E) in Support of Its Application for Approval
of the Results of Its 2018 Local Capacity
Requirements Request for Proposals (LCR RFP)***

PUBLIC VERSION

Before the

Public Utilities Commission of the State of California

Rosemead, California
April 22, 2019

SCE-01: Testimony of Southern California Edison Company (U 338-E) in Support of Its Application for Approval of the Results of Its 2018 Local Capacity Requirements Request for Proposal (LCR RFP)

Table Of Contents

	Section	Page	Witness
I.	INTRODUCTION AND BACKGROUND	1	A. Hernandez
	A. Introduction.....	1	
	1. Application Overview	2	
	B. Background.....	3	
II.	BASIS FOR LCR PROCUREMENT NEED	7	J. Yuen
	A. Description of Moorpark Sub-Area	7	
	B. Baseline Planning Assumptions.....	8	
	1. CAISO’s Supplemental Local Capacity Assessment for the Santa Clara Sub-Area	9	
	2. Local Capacity Requirements for the Goleta Sub-Area	10	
	C. The Role of Preferred Resources and Energy Storage in Meeting Moorpark Sub-Area LCR Needs.....	11	
	1. CAISO’s Moorpark Sub-Area LCR Alternative Study	11	
III.	UNIQUE AND LOCALIZED GRID RESILIENCY ISSUE IN THE SANTA BARBARA/GOLETA AREA	12	
	A. Procurement to Address Unique and Localized Grid Resiliency Issue in the Santa Barbara/Goleta Area	15	
IV.	2018 LCR RFP PROCESS OVERVIEW	17	A. Hernandez
	A. Solicitation Timeline/Schedule.....	17	
	B. Solicitation Structure	18	
	1. Internal Preparation.....	19	
	2. RFP Launch	20	

SCE-01: Testimony of Southern California Edison Company (U 338-E) in Support of Its Application for Approval of the Results of Its 2018 Local Capacity Requirements Request for Proposal (LCR RFP)

Table Of Contents (Continued)

	Section	Page	Witness
3.	Notice of Intent	21	
4.	Indicative Offers Submitted by Bidders	21	
5.	Shortlist Notification.....	21	
6.	Contract Negotiation.....	21	
7.	Commercial Lockdown.....	21	
8.	Negotiation Deadline	22	
9.	Final Binding Offer Submission	22	
10.	Notice of Acceptance/Rejection	22	
C.	Eligibility Requirements	22	
D.	Bidder Outreach	23	
E.	Addressing Procurement and Development Challenges.....	23	
1.	Selecting LCR Projects That Will be Online by June 2021	24	
2.	Meeting Energy Needs in Addition to Capacity Needs	25	
F.	Incrementality	26	
1.	Incrementality Framework.....	26	
G.	Consultation with the CAISO	29	
H.	Role of IE and CAM Group.....	30	
1.	Engagement of IE	30	
a)	IE Participation in the Development of the RFP, Bid Solicitation, and Bid Selection Process	31	

SCE-01: Testimony of Southern California Edison Company (U 338-E) in Support of Its Application for Approval of the Results of Its 2018 Local Capacity Requirements Request for Proposal (LCR RFP)

Table Of Contents (Continued)

	Section	Page	Witness
	2. Consultation with CAM Group and Energy Division.....	31	
	I. Community Engagement	32	
V.	2018 LCR RFP PARTICIPATION	36	
	A. Summary of Participation	36	
	1. Indicative Offer Submittal	36	
	2. Shortlist Notification.....	37	
	3. Contract Negotiations	38	
	4. Final Binding Offer Submission	39	
VI.	2018 LCR RFP VALUATION PROCESS.....	41	M. Freeman
	A. Valuation & Selection Methodology	41	
	1. Overview.....	41	
	2. Least-Cost, Best-Fit Approach.....	42	
	a) Quantitative Factors: Benefits.....	42	
	(1) Resource Adequacy Benefit.....	42	
	(2) Net Day-Ahead, Real-Time Energy Benefit	42	
	(3) Ancillary Services Value Benefit.....	43	
	(4) Renewable Energy Credit Benefit.....	43	
	b) Quantitative Factors: Costs	43	
	(1) Contract Payments	44	

SCE-01: Testimony of Southern California Edison Company (U 338-E) in Support of Its Application for Approval of the Results of Its 2018 Local Capacity Requirements Request for Proposal (LCR RFP)

Table Of Contents (Continued)

	Section	Page	Witness
	(2) Debt Equivalence Cost.....	44	
	(3) Transmission Upgrade Costs	44	
c)	Qualitative Assessment & Factors	45	
	(1) Project Viability	45	
	(2) Location of Project in a Disadvantaged Community ("DAC").....	46	
	(3) Preferred Resource.....	46	
	(4) Contribution to Santa Barbara/Goleta Area Resiliency Objectives.....	46	
B.	Valuation and Selection Results	46	
1.	Overview.....	46	
2.	Meeting Both LCR Capacity and Energy Needs.....	47	
3.	Viability Assessment to Meet 2021 LCR Needs.....	49	
4.	Final Offer Evaluation Results.....	51	
a)	Summary	51	
	(1) Quantitative Evaluation of Offers	51	
	(2) Qualitative Evaluation of Offers	52	
	(3) Charging Constraint Consideration	54	
5.	Final LCR RFP Selection Portfolio	55	

**SCE-01: Testimony of Southern California Edison Company
(U 338-E) in Support of Its Application for Approval of the Results
of Its 2018 Local Capacity Requirements Request for Proposal
(LCR RFP)**

Table Of Contents (Continued)

	Section	Page	Witness
	a) LCR Solution Portfolio	56	
VII.	2018 LCR RFP SOLICITATION RESULTS.....	57	A. Hernandez
	A. Description of Selected Offer	57	
	1. Contingencies and Milestones	59	
	2. Safety	59	
	3. Interim Emissions Performance Standards	60	
VIII.	ALLOCATION OF BENEFITS AND COSTS.....	61	E. Little
	A. Overview.....	61	
	B. Allocation of Benefits and Costs	62	
IX.	COST RECOVERY AND REVENUE ALLOCATION.....	63	M. Sheriff
	A. Cost Recovery.....	63	
	B. Ratemaking	63	
	C. Review of LCR RFP Costs	64	
	D. Revenue Allocation & Rate Design.....	64	R. Thomas
	1. New System Generation Rate Component	66	
	Appendix A Witness Qualifications and Confidentiality Declarations		

I.

INTRODUCTION AND BACKGROUND

A. Introduction

On February 13, 2013, in the Long Term Procurement Plan (“LTPP”) proceeding, the California Public Utilities Commission (“Commission” or “CPUC”) issued Decision (“D.”) 13-02-015 (or the “Track 1 decision”), in which it authorized Southern California Edison Company (“SCE”) to procure between 215 to 290 megawatts (“MW”) of electrical capacity in the Moorpark sub-area of the Big Creek/Ventura local reliability area to meet long-term local capacity requirements by 2021.¹ To meet this need, SCE issued the 2013 Local Capacity Requirements (“LCR”) request for offers (“RFO”) (“2013 LCR RFO”) seeking new resources in the Moorpark sub-area, including Preferred Resources,² Energy Storage (“ES”) resources, and Natural Gas-Fired Generation (“GFG”). Through the 2013 LCR RFO, SCE contracted for 262 MW of GFG and approximately 12 MW of Preferred Resources that were subsequently approved by the Commission in D.16-05-050.³ However, only the 12 MW of Preferred Resources are, or will be, available to meet LCR needs due to events that transpired in 2017,

¹ D.13-02-015 at 131 (Ordering Paragraph (“OP”) 2). D.13-02-015 also authorized SCE to procure between 1,400- 1,800 MW of electric capacity to meet local capacity requirements in the West Los Angeles sub-area of the Los Angeles basin local reliability area. D.13-02-015 at 130-131 (OP 1). The West LA Basin contracts selected through the 2013 LCR RFO were approved by the Commission, in part, in D.15-11-041, which was affirmed by D.16-05-053.

² Preferred Resources are defined in the State’s Energy Action Plan II, at page 2, as follows: “The loading order identifies energy efficiency and demand response as the State’s preferred means of meeting growing energy needs. After cost-effective [energy] efficiency and demand response, we rely on renewable sources of power and distributed generation, such as combined heat and power applications. To the extent [energy] efficiency, demand response, renewable resources, and distributed generation are unable to satisfy increasing energy and capacity needs, we support clean and efficient fossil-fired generation. Concurrently, the bulk electricity transmission grid and distribution facility infrastructure must be improved to support growing demand centers and the interconnection of new generation, both on the utility and customer side of the meter.”

³ All of the contracts for incremental generation in the Moorpark sub-area were approved by the Commission with the exception of a 0.5 MW in-front-of-the-meter ES contract that was rejected due to its linkage to a contract for refurbishment of the 54 MW Ellwood GFG facility, which was also reject by the Commission.

1 which are explained in detail below. Thus, with a remaining 278 MW procurement authorization
2 for the Moorpark sub-area (per D.13-02-015), on February 28, 2018 SCE launched the 2018
3 LCR Request for Proposals (“LCR RFP”) for additional new resources in the Moorpark sub-area
4 to meet local reliability needs by June 2021. Through the 2018 LCR RFP, and consistent with
5 the authority granted in D.13-02-015, SCE selected and is seeking approval through this
6 application of the Strata Saticoy, LLC (“Strata Saticoy”) 100 MW⁴/400 MWh in-front-of-the-
7 meter (“IFOM”) battery energy storage project with a delivery period expected to begin on
8 December 1, 2020.

9 To meet the remainder of the outstanding LCR need in the Moorpark sub-area by June
10 2021 (total LCR need is approximately 102-164 MW of capacity and an energy need of
11 approximately 602 MWh), SCE will submit an Advice Letter to the Commission seeking
12 approval of contracts selected through SCE’s second Aliso Canyon Energy Storage (“ACES 2”) RFO
13 that were also solicited pursuant to Commission direction. See Chapter VI, Section B for a
14 detailed discussion of the intersection of the 2018 LCR RFP and the ACES 2 RFO.

15 **1. Application Overview**

16 D.13-02-015 ordered SCE to file an application for approval of all contracts entered into
17 as a result of the LCR procurement process for new capacity in the Moorpark sub-area.⁵ In this
18 application (“Application”), SCE explains how it sought to procure additional resources to meet
19 LCR needs in the Moorpark sub-area through the 2018 LCR RFP. Chapter II of the Application
20 explains the basis for the LCR need. Chapter III provides background on resiliency
21 considerations in the Goleta/Santa Barbara area of the Moorpark sub-area. Chapter IV
22 summarizes the solicitation process, with details on: (1) the schedule and structure of the
23 solicitation, (2) bidder requirements, (3) outreach efforts, (4) procurement challenges, (5) SCE’s

⁴ The MW quantity specified in a contract for a project may differ from the project’s LCR MW, which represents a resource’s contribution to the LCR need in June 2021.

⁵ D.13-02-015 at 135 (OP 11).

1 consultation with the California Independent System Operator (“CAISO”), and (6) the role of the
2 Independent Evaluator (“IE”) and consultation with the Cost Allocation Mechanism (“CAM”)
3 group.⁶ Chapter V provides an overview of bidder participation in the solicitation. Chapter VI
4 explains the valuation and selection process, the intersection of the LCR RFP and ACES 2 RFO,
5 and how a portion of the Moorpark sub-area LCR needs are being met through resources
6 procured through the ACES 2 RFO. Chapter VII includes a summary of the solicitation results.
7 Chapter VIII provides SCE’s proposal for the allocation of benefits and costs. Finally, Chapter
8 IX explains SCE’s proposal for recovering the costs of the LCR resources, ratemaking treatment
9 and revenue allocation.

10 **B. Background**

11 On February 13, 2013, in the LTPP proceeding, the Commission issued D.13-02-015, the
12 Track 1 Decision, in which it authorized SCE to procure between 215 to 290 MW of electrical
13 capacity in the Moorpark sub-area of the Big Creek/Ventura local reliability area to meet long-
14 term local capacity requirements by 2021.⁷ The need for capacity in the Moorpark sub-area is
15 largely due to the expected retirement of approximately 2,000 MW of once-through cooling
16 (“OTC”) generation facilities in the Moorpark sub-area by 2021 in compliance with State Water
17 Resources Control Board (“SWRCB”) regulations.⁸

⁶ As required by the Commission, SCE conducts procurement reviews with one of two groups, its Procurement Review Group or its CAM Group, when appropriate. D.04-12-048 at 241 (OP 15); D.07-12-052 at 127-130, 301 (OP 8). The Procurement Review Group is consulted for procurement on behalf of bundled service load while the CAM Group is consulted for procurement on behalf of all benefitting customers.

⁷ *Id.* at 131 (OP 2). D.13-02-015 also authorized SCE to procure between 1,400- 1,800 MW of electric capacity to meet local capacity requirements in the West Los Angeles sub-area of the Los Angeles basin local reliability area. *Id.* at 130-131 (OP 1).

⁸ *Id.* at 6, 120 (Finding of Fact (“FOF”) 5); California Energy Commission’s Tracking Progress, *Once-Through Cooling Phase-Out* (last updated on February 17, 2015) at 6 (total MW from the retirement of the following OTC plants in the Moorpark sub-area: Mandalay 1,2 and Ormond Beach 1,2) available at http://www.energy.ca.gov/renewables/tracking_progress/documents/once_through_cooling.pdf.

1 The Track 1 Decision also ordered SCE to submit an LCR procurement plan to Energy
2 Division explaining how it would conduct its LCR solicitation.⁹ SCE submitted its original 2013
3 LCR RFO Procurement Plan (“2013 LCR RFO Procurement Plan”) on July 15, 2013.¹⁰ In
4 accordance with the Track 1 Decision, Energy Division reviewed SCE’s 2013 LCR RFO
5 Procurement Plan and requested that SCE submit a modified plan with additional information.¹¹
6 SCE submitted its final modified 2013 LCR RFO Procurement Plan on August 30, 2013.¹²
7 Energy Division approved SCE’s modified 2013 LCR RFO Procurement Plan on September 4,
8 2013.

9 To meet the need identified in D.13-02-015 (the Track 1 Decision), on September 12,
10 2013, SCE issued its all-source 2013 LCR RFO in compliance with CPUC direction seeking new
11 LCR resources, including Preferred Resources, (Energy Efficiency (“EE”), Demand Response
12 (“DR”), renewable resources, Combined Heat and Power (“CHP”) resources, and Distributed
13 Generation (“DG”)), energy storage resources, and GFG.

14 D.13-02-015 also ordered SCE to file an application for approval of all contracts entered
15 into as a result of the procurement process for new capacity in the Moorpark sub-area.¹³ On
16 November 26, 2014, SCE filed an application for approval of the results of its 2013 LCR RFO
17 for the Moorpark sub-area seeking approval of 11 contracts.¹⁴ On June 1, 2016, the Commission
18 issued D.16-05-050, approving, in part, SCE’s application for approval of the results of its 2013

⁹ D.13-02-015 at 133-134 (OP 5-7).

¹⁰ A.14-11-016, SCE’s LCR RFO Moorpark Application: Exhibit SCE-1, SCE’s Opening Testimony, at 4.

¹¹ A.14-11-016, SCE’s LCR RFO Moorpark Application: Exhibit SCE-1, SCE’s Opening Testimony, at 4.

¹² *Id.*

¹³ D.13-02-015 at 135 (OP 11).

¹⁴ A.14-11-016, SCE’s Application for Approval of the Results of Its 2013 Local Capacity Requirements Request for Offers for the Moorpark Sub-Area, filed November 26, 2014.

1 LCR RFO for the Moorpark sub-area, including approval of the Puente contract, a 262 MW GFG
2 project, and approximately 12 MW of Preferred Resources contracts.¹⁵

3 Through its application, SCE also sought approval of the Ellwood Refurbishment
4 contract and a linked 0.5 MW IFOM energy storage contract to ensure the continued operation of
5 Ellwood as the original Moorpark LCR need determination assumed such. The Commission
6 found that although Ellwood is not an incremental resource that would count towards LCR need,
7 “it is appropriate to consider the Ellwood contract in this proceeding.”¹⁶ D.16-05-050 also
8 determined that “this proceeding is the most efficient procedural venue to establish if there is a
9 separate local reliability need in the Goleta area....”¹⁷ Based on these findings, the Commission
10 deferred consideration of the Ellwood Refurbishment contract and the linked 0.5 MW IFOM
11 energy storage contract, both located in Goleta, to a separate decision in the same docket that
12 addressed the unique grid resiliency issues in the Santa Barbara/Goleta area and the best way to
13 meet those needs.¹⁸ In D.17-09-034, issued on October 4, 2017, the Commission ultimately
14 rejected the Ellwood Refurbishment and linked IFOM energy storage contracts.¹⁹

15 On April 15, 2015, after SCE awarded it a contract through the 2013 LCR RFO, NRG
16 Oxnard Energy Center LLC (“NRG”) filed an Application for Certification (“AFC”) at the
17 California Energy Commission (“CEC”) seeking authority to construct and operate the Puente
18 project. Throughout the CEC certification proceeding there was significant opposition to the
19 project from the City of Oxnard, environmental groups, and community members. On
20 October 5, 2017, the CEC Siting Committee that was assigned to the Puente projects’
21 certification provided notice of its intent to issue a Presiding Member’s Proposed Decision
22 (“PMPD”) that recommended denial of certification of the Puente project. On October 16, 2017,

¹⁵ D.16-05-050 at 39 (OP 1).

¹⁶ *Id.* at 30.

¹⁷ *Id.* at 31.

¹⁸ *Id.* at 38 (Conclusion of Law (“COL”) 8).

¹⁹ D.17-09-034 at 27 (OP 1).

1 NRG filed a motion requesting that the Puente certification proceeding be suspended.
2 On November 3, 2017, the CEC Siting Committee granted NRG's motion to suspend the Puente
3 certification proceeding. If the CEC had certified the Puente project, and it had achieved its
4 Commercial Operation Date ("COD") as contemplated in SCE's PPA with NRG, it would have
5 contributed to meeting LCR needs in the Moorpark sub-area in 2021.

6 As a result of the notice regarding the PMPD and the suspension of the CEC permitting
7 process for Puente, SCE reinitiated its LCR procurement planning process. As part of that
8 process, and in accordance with D.13-02-015 and a November 27, 2017 letter from the Director
9 of Energy Division to SCE,²⁰ both of which required SCE to provide a procurement plan
10 demonstrating how it would procure CPUC-authorized resources before launching a solicitation
11 in the Moorpark sub-area, SCE submitted its 2018 Moorpark Sub-Area LCR Procurement Plan
12 ("2018 Moorpark LCR Procurement Plan") to Energy Division on December 21, 2017.²¹ Energy
13 Division offered parties the opportunity to comment on the 2018 Moorpark LCR Procurement
14 Plan by January 16, 2018; several parties submitted comments to Energy Division. In
15 accordance with the Track 1 decision, Energy Division reviewed SCE's Moorpark LCR
16 Procurement Plan and requested that SCE submit a modified plan with additional information.
17 SCE submitted its modified plan on February 2, 2018. Energy Division approved SCE's
18 modified Moorpark LCR Procurement Plan on February 7, 2018.²² SCE launched the 2018 LCR
19 RFP on February 28, 2018.

²⁰ Letter to SCE from Edward Randolph, Director, Energy Division, dated November 27, 2017.

²¹ D.13-02-015 at 133-134 (OP 5).

²² SCE made additional revisions to the 2018 Moorpark LCR Procurement Plan precipitated by D.18-06-030 (Decision Adopting Local Capacity Obligations for 2019 and Refining the Resource Adequacy ("RA") Program), which removed D.14-06-050's prohibition for RA eligibility on combined storage and DR resources. D.18-06-030 allows combined resources to count as RA, but does not prescribe how these combined resources would be counted. SCE revised its Plan to both include combined resources and propose an RA counting methodology for these resources. On July 31, 2018, SCE recirculated the Plan to the service lists for A.14-11-016 and R.16-02-007. Energy Division solicited comments and parties submitted comments on the Plan's additional revisions. The Energy Division approved the further revised plan on November 29, 2018.

II.

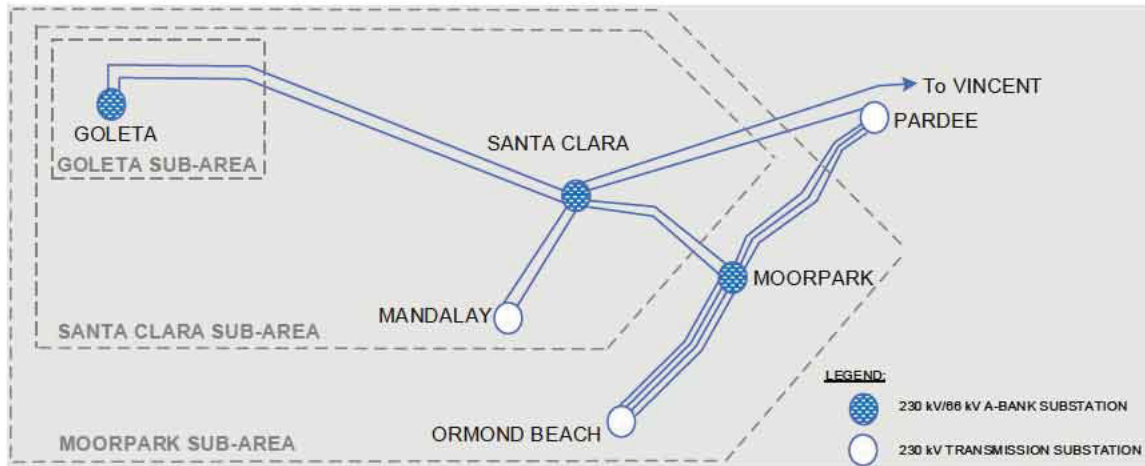
BASIS FOR LCR PROCUREMENT NEED

A. Description of Moorpark Sub-Area

As discussed above, SCE solicited offers through the LCR RFP for resources in the Moorpark sub-area. The Moorpark sub-area is in southern California and covers Ventura and Santa Barbara Counties. Within the Moorpark sub-area are two smaller electrical sub-areas, the Santa Clara and Goleta sub-areas. Figure II-1 below shows the three 230/66 kV (A-bank) substations in the respective LCR sub-areas: the Moorpark A-bank Substation; the Santa Clara A-bank Substation; and the Goleta A-bank Substation. Each A-bank Substation radially “feeds” an underlying local subtransmission network of 66/12kV or 66/16kV (B-bank) substations, which ultimately distribute and provide electricity to SCE customers. These local electrical networks, starting from the A-bank Substation down to the customer, are referred to as A-Systems (*i.e.*, Moorpark, Santa Clara, and Goleta A-Systems). As shown in Figure II-1, the Santa Clara sub-area includes the Santa Clara and Goleta A-Systems while the Goleta sub-area includes just the Goleta A-System.²³

²³ Moorpark Sub-Area Local Capacity Alternative Study, dated August 16, 2017, at 6, available at https://www.caiso.com/Documents/Aug16_2017_MoorparkSub-AreaLocalCapacityRequirementStudy-PuentePowerProject_15-AFC-01.pdf.

Figure II-1
LCR Sub-Areas in the Big Creek/Ventura Local Reliability Area



B. Baseline Planning Assumptions

In its 2022 Local Capacity Technical Analysis, issued on May 3, 2017, the CAISO identified the most critical contingency for the Moorpark sub-area as the loss of the Moorpark-Pardee 230 kV #3 line followed by the loss of the Moorpark-Pardee 230 kV #1 and #2 lines (“Moorpark LCR Contingency”), which could cause voltage collapse.²⁴ The Moorpark sub-area includes the Ormond Beach and Mandalay generating stations, which are OTC facilities that are scheduled to shut down per SWRCB regulation by 2021. The loss of these OTC units combined with the Moorpark LCR Contingency led to the original Moorpark sub-area LCR need determination of 215 to 290 MW established in the LTPP Track 1 Decision.

Since the D.13-02-015 was issued, in addition to the OTC unit retirements, two other generation plants in the Moorpark sub-area, the Mandalay Generating Station Unit 3 (“Mandalay 3”) and the Ellwood Generating Station (“Ellwood”), are assumed to be retired post-2020, adding to the LCR deficiency in the Moorpark sub-area.²⁵ To partially address this LCR

²⁴ CAISO’s 2022 Local Capacity Technical Analysis, Final Report and Study Results, available at <http://www.caiso.com/Documents/Final2022Long-TermLocalCapacityTechnicalReport.pdf>.

²⁵ Mandalay Generating Station Notice of Change in Long-Term Status of Generating Units, dated October 19, 2017; Ellwood Generating Station Notice of Change in Long-Term Status of Generating Unit, dated February 28, 2018.

1 deficiency, SCE identified a transmission solution: a fourth 230 kV line between Moorpark-
2 Pardee that can address the voltage collapse following the critical Moorpark LCR Contingency.

3 Beyond the Moorpark LCR Contingency, in its 2023 Local Capacity Technical Analysis,
4 issued on May 15, 2018, the CAISO identified the most critical contingency for the Santa Clara
5 sub-area as the loss of the Pardee - Santa Clara 230 kV line followed by the loss of Moorpark -
6 Santa Clara 230 kV #1 and #2 lines (“Santa Clara LCR Contingency”), which could cause
7 voltage collapse.²⁶ The Santa Clara sub-area includes the Mandalay OTC units, Mandalay 3, and
8 Ellwood, which are assumed to be retired post-2020. In addition, the Las Flores Canyon
9 Cogeneration Facility, or Exgen, is also within the Santa Clara sub-area, but was assumed to be
10 continually unavailable. The Santa Clara LCR Contingency establishes a local capacity
11 deficiency in the Santa Clara sub-area ranging from approximately 102 to 164 MW depending on
12 locational effectiveness and reactive power capability of the new resources procured through the
13 LCR RFP.²⁷

14 **1. CAISO’s Supplemental Local Capacity Assessment for the Santa Clara Sub-**
15 **Area**

16 In order to facilitate consideration in the RFP process of variable or run-time
17 limited resources, such as energy storage, solar, DR and EE resources, to meet LCR needs, SCE
18 requested the CAISO provide a supplemental local capacity assessment that included the hourly
19 local capacity need, including the duration and the time of day of the local capacity need.²⁸

20 On June 18, 2018, the CAISO issued its revised Supplemental Local Capacity Assessment for

²⁶ Appendix F, CAISO Documents, CAISO’s 2023 Local Capacity Technical Analysis, Final Report and Study Results, dated May 15, 2018 (also available at <http://www.caiso.com/Documents/Final2023Long-TermLocalCapacityTechnicalReport.pdf>).

²⁷ *Id.*

²⁸ Appendix F, CAISO Documents, CAISO’s 2023 Local Capacity Technical Analysis, Supplemental Local Capacity Assessment for the Santa Clara Sub Area, dated June 18, 2018, at 3 (also available at <http://www.caiso.com/Documents/2023LocalCapacityTechnicalAnalysisfortheSantaClaraSub-Area.pdf>).

1 the Santa Clara Sub-Area. The assessment supplements the 2023 Local Capacity Technical
2 Analysis for the Santa Clara Sub-Area, and as such, it uses the same starting power flow base
3 case, load forecast, transmission, resource, and other assumptions as the local capacity technical
4 analysis.²⁹ In the supplemental assessment, the CAISO developed the load shape for the Santa
5 Clara sub-area based upon the CEC forecast load shape for the entire SCE area and concluded
6 that the duration of local capacity need is approximately eight (8) hours between hour-ending 15
7 to hour-ending 22 Pacific Prevailing Time (“PPT”).³⁰ The assessment also determined that
8 resources located at Goleta are more effective than those located at Santa Clara.³¹

9 **2. Local Capacity Requirements for the Goleta Sub-Area**

10 Most recently in its 2028 Long Term LCR Study Draft Results for the Big
11 Creek/Ventura reliability area, the CAISO identified local capacity requirements for the newly
12 defined Goleta sub-area.³² The Goleta sub-area includes Ellwood, which was assumed to be
13 retired post-2020. In addition, the Las Flores Canyon Cogeneration Facility, or Exgen, is within
14 the Goleta sub-area, but was assumed to be continually unavailable. The identified Goleta local
15 capacity requirement is the larger of either (i) 42 MW or (ii) 32 MW plus the largest resource in
16 Goleta taking into account resources procured through the LCR RFP.³³

²⁹ *Id.*

³⁰ *Id.* at 8.

³¹ *Id.*

³² CAISO’s Board Approved 2018-2019 Transmission Plan, Appendix G, dated March 29, 2019, at 138-144, available at <http://www.caiso.com/Documents/AppendixG-BoardApproved2018-2019TransmissionPlan.pdf>

³³ *Id.*

1 **C. The Role of Preferred Resources and Energy Storage in Meeting Moorpark Sub-**
2 **Area LCR Needs**

3 **1. CAISO's Moorpark Sub-Area LCR Alternative Study**

4 Pursuant to a CEC request in the certification proceeding for the Puente project,
5 the CAISO prepared a study regarding local capacity alternatives to the Puente project.
6 On August 16, 2017, the CAISO issued its Moorpark Sub-Area Local Capacity Alternative
7 Study to quantify the amount and determine the characteristics of Preferred Resources, energy
8 storage, and/or reactive power devices that would be necessary to meet local capacity
9 requirements in the Moorpark sub-area in the absence of the Puente project.³⁴ The study found
10 that the local capacity requirements in the Moorpark sub-area could be met with Preferred
11 Resources, energy storage, and other non-GFG options.³⁵ The study also showed that the
12 effectiveness of Preferred Resources and energy storage requires alignment between the times
13 when these resources can be available to reduce or meet LCR needs and when LCR needs
14 occur.³⁶

³⁴ Moorpark Sub-Area Local Capacity Alternative Study, dated, August 16, 2017, available at https://www.caiso.com/Documents/Aug16_2017_MoorparkSub-AreaLocalCapacityRequirementStudy-PuentePowerProject_15-AFC-01.pdf.

³⁵ *Id.* at 29-30.

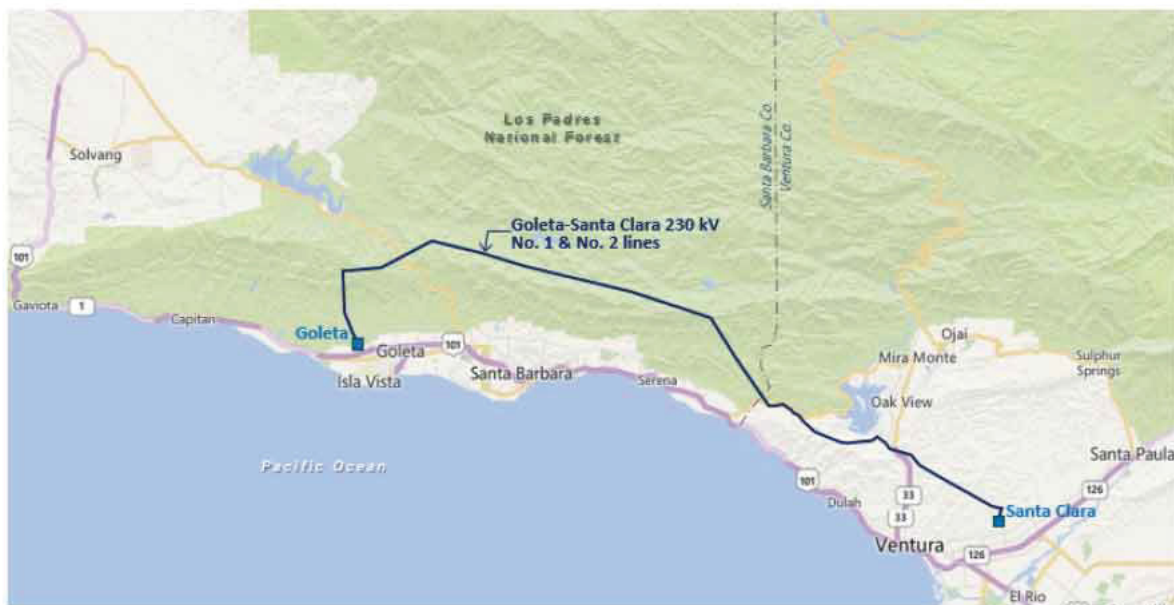
³⁶ *Id.* at 17-18.

III.

UNIQUE AND LOCALIZED GRID RESILIENCY ISSUE IN THE SANTA BARBARA/GOLETA AREA

As established in Phase 2 of the LCR RFO Moorpark proceeding, A.14-11-016, there is a unique and localized grid resiliency issue in the Santa Barbara/Goleta area.³⁷ The Santa Barbara/Goleta area is a unique geographic area located in the western-most part of SCE's service territory.³⁸ This area is relatively isolated as it is bound by the Pacific Ocean to the south and west, and the Los Padres National Forest to the north and east.³⁹ See Figure III-2 for a diagram of the area.

***Figure III-2
Goleta-Santa Clara Transmission Lines***



³⁷ A.14-11-016, SCE's LCR RFO Moorpark Application: Exhibit SCE-11, SCE's Phase 2 Opening Testimony, at 1-3. SCE's Opening Testimony also explained the unique issues facing the Santa Barbara/Goleta area. A.14-11-016, SCE's LCR RFO Moorpark Application: Exhibit SCE-1, SCE's Opening Testimony, at 6-7.

³⁸ *Id.* at 7.

³⁹ *Id.*

1 The Goleta 230/66 kV Substation serves the load in Santa Barbara/Goleta area and is
2 connected to the SCE transmission system through the two Goleta-Santa Clara 230 kV
3 transmission lines.⁴⁰ These two transmission lines are the only points of connection between the
4 Goleta 230/66 kV Substation and the rest of SCE’s transmission system, and thus, the sole
5 source of transmission service for the Santa Barbara/Goleta area.⁴¹ The two Goleta-Santa Clara
6 230 kV transmission lines are on the same set of transmission towers, which increases the
7 potential for a common-mode failure of both lines.⁴² The concern about losing the Goleta-Santa
8 Clara 230 kV transmission lines is largely due to the towers being located on rugged,
9 mountainous terrain where landslides caused by heavy rainfall (*e.g.*, 1997-1998 El Niño
10 conditions) and frequent fires (*e.g.*, 2007 Zaca, 2008 Gap, 2008 Tea, 2009 Jesusita, and 2017
11 Thomas fires) create a heightened risk to the transmission lines and towers. Due to the rugged
12 terrain, any required repair and replacement of transmission lines and transmission towers could
13 take up to several weeks if a natural disaster, such as a landslide or earthquake, occurs.⁴³

14 The unique grid issues in the Santa Barbara/Goleta area are not reliability issues based on
15 North American Reliability Corporation (“NERC”) or CAISO standards. The loss of the Goleta-
16 Santa Clara 230 kV transmission lines is referred to as an N-2 contingency. The N-2 of the
17 Goleta-Santa Clara 230 kV lines is compliant with NERC Reliability Standard TPL-001-4,
18 which allows customer load to be dropped without a stated timeframe for restoration.⁴⁴

⁴⁰ *Id.*

⁴¹ *Id.* at 1-2.

⁴² *Id.* at 2.

⁴³ *Id.*

⁴⁴ A.14-11-016, SCE’s LCR RFO Moorpark Application: Exhibit SCE-11, SCE’s Phase 2 Opening Testimony, at 2. *See also* SCE, Chinn, Transcript, Vol. 5 at 815:15-22 (November 1, 2016) (“[T]he issue we’re trying to address is not specific to a NERC or [CA]ISO standard[] in that NERC and [CA]ISO standards don’t provide a restoration time...those standards allow for the loss of the transmission system, and basically the systems allow the blackout that is permitted under...both NERC and [CA]ISO standards.”).

1 In the event of an outage of the Goleta-Santa Clara 230 kV transmission lines (*i.e.*, an
2 N-2 event), approximately 85,000 customers in the Santa Barbara/Goleta area would lose power
3 until emergency electrical back-up power could be delivered to the area.⁴⁵ Service disruption
4 could initially affect all customers, including critical services (*e.g.*, hospitals, schools, and street
5 lights).⁴⁶ Emergency back-up power would be delivered via three existing sub-transmission tie
6 lines from the Santa Clara 66 kV sub-transmission system.⁴⁷ The Santa Clara 66 kV sub-
7 transmission system normally serves western Ventura County, but can also act as a partial back-
8 up that is capable of replacing a portion of the capacity provided by the Goleta-Santa Clara 230
9 kV transmission lines.⁴⁸ If the Goleta-Santa Clara 230 kV transmission lines are not able to be
10 reenergized, SCE's system operators would begin utilizing the 66 kV lines to pick up load in the
11 Santa Barbara/Goleta area within an hour.⁴⁹

12 However, the existing 66 kV facilities do not have adequate capacity to serve the entire
13 285 MW forecasted annual peak load, nor provide adequate short circuit duty in the Santa
14 Barbara/Goleta area if both Goleta-Santa Clara 230 kV transmission lines are lost.⁵⁰ The 66 kV
15 facilities currently have sufficient capacity to reroute 100 MW to the Santa Barbara/Goleta
16 area.⁵¹ A planned upgrade of the 66 kV sub-transmission system, the Santa Barbara County
17 Reliability Project, which is expected to be completed in May 2019, will increase this emergency

⁴⁵ *Id.* at 9.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.* at 9-10. The projected load was based on SCE's 2016 Transmission Substation Plan ("TSP") load forecast –A local desalination plant and other developments contribute to the projected peak load forecast. *See* Exhibit SCE-14, Southern California Edison Company's 2016 Transmission Substation Plan, Goleta A-Bank Load Forecast.

⁵¹ *Id.* at 10.

1 back-up capacity from 100 MW to 180 MW.⁵² However, even rerouting 180 MW through the 66
2 kV system would not allow for all Santa Barbara/Goleta annual peak load to be met in the event
3 both Goleta-Santa Clara 230 kV transmission lines are down; there would still be a 105 MW
4 peak shortfall beginning in 2019, assuming the retirement of the 54 MW Ellwood peaker facility.

5 **A. Procurement to Address Unique and Localized Grid Resiliency Issue in the Santa**
6 **Barbara/Goleta Area**

7 In an attempt to address the unique and localized grid resiliency issue in the Santa
8 Barbara/Goleta area (discussed in the section above), SCE launched the Goleta RFO on March 3,
9 2017. Although the Goleta RFO was eventually suspended and never resumed, its launch
10 benefited the 2018 LCR RFP in that some developers who bid into the Goleta RFO submitted
11 their projects into the interconnection process, specifically, Queue Cluster (“QC”) 10, in May
12 2017. This was helpful because developing a project requires many time-consuming steps,
13 including beginning the process of identifying sites, negotiating with landowners, and starting
14 the interconnection process. The interconnection process can take years, and if developers miss
15 a QC study window, the process can be delayed by a year. Thus, those projects that entered QC
16 10 in May 2017 were already well into the interconnection study process by the time the 2018
17 LCR RFP began, making developer turnout in both solicitations more robust.

18 As noted in SCE’s 2018 Moorpark LCR Procurement Plan, procurement through the
19 LCR RFP of resources in Goleta also had the potential to address the unique and localized grid
20 resiliency issue in the Santa Barbara/Goleta area. For this reason, SCE solicited proposals for
21 small (less than 55 MW) GFG projects interconnected to the Goleta A-System, which includes
22 the Goleta 230/66 kV A-bank Substation and the underlying voltage network, because of
23 potential charging constraints for energy storage connected to the Goleta A-System in the event
24 of the loss of the Goleta-Santa Clara 230 kV transmission lines. Notwithstanding SCE’s plan to

⁵² *Id.* (citing Exhibit SCE-13, Excerpt from Proponent’s Environmental Assessment Santa Barbara County Reliability Project at 1-5).

1 consider small GFG projects in the Santa Barbara/Goleta area, SCE expressed a preference for
2 Preferred Resources and energy storage resources in the Santa Barbara/Goleta area. In contrast,
3 SCE only considered Preferred Resources and energy storage for resources that would connect to
4 the Moorpark and Santa Clara 230/66 kV A-bank substations. Ultimately, SCE did not shortlist
5 any GFG resources for consideration in the LCR RFP.

6 Any energy storage offers selected in the Goleta system will be limited at addressing the
7 unique and localized grid resiliency issue in the Santa Barbara/Goleta area. This is because
8 energy storage has a limited charging capability during an N-2 event, depending on the
9 circumstances of the outage and when it occurs. Over the course of an extended outage of the
10 230 kV lines, energy storage would be required to discharge during the day in order to serve
11 peak load and re-charge during hours when Goleta load is reduced. Given the limitations of the
12 66 kV tie lines from the adjacent system, there may not be enough energy in the off-peak hours
13 to simultaneously recharge energy storage and serve the Goleta load, thus impairing the ability of
14 the energy storage to fully meet all energy needs the following operating day. Additional
15 *generation* resources interconnected to the Goleta Substation, such as GFG, solar, or fuel cells,
16 are needed to enable greater reliance on energy storage and fully address the unique and
17 localized grid resiliency issue in the Santa Barbara/Goleta area.

18 It should be noted that the Strata 100 MW/400MWh IFOM battery energy storage project
19 for which SCE is seeking approval in this Application is being interconnected within the Santa
20 Clara A-System, and not the Goleta A-System, thus, it will not help address the grid resiliency
21 issue in the Santa Barbara/Goleta area. However, through SCE's ACES 2 RFO, SCE selected
22 IFOM energy storage projects located in the Goleta A-system that will incrementally help
23 address the grid resiliency issue in the Santa Barbara/Goleta area.

IV.

2018 LCR RFP PROCESS OVERVIEW

The LCR RFP followed a similar process and included a similar structure as many of SCE's prior, successfully-administered solicitations. This Chapter describes the following aspects of the solicitation process: (A) timeline; (B) structure; (C) bidder and project eligibility requirements; (D) RFP objectives and preferences; (E) bidder outreach; (F) procurement and development challenges; (G) incrementality; (H) SCE's consultation with the CAISO; (I) the role of the Independent Evaluator and SCE's consultation with the CAM Group and Energy Division; and (J) SCE's engagement with the Santa Barbara and Ventura County communities.

A. Solicitation Timeline/Schedule

The final LCR RFP schedule is shown in Table IV-1 below. This schedule generally adheres, with some modifications, to the proposed RFP Timeline submitted in SCE's 2018 Moorpark LCR Procurement Plan, which anticipated launching the LCR RFP in the first quarter (Q1) of 2018 and submitting the LCR RFP Application for contract approval near the start of the second quarter (Q2) of 2019.

Table IV-1
LCR RFP Schedule

Date	LCR RFP Event
December 20, 2017	Market Awareness Conference
February 28, 2018	RFP Launch
March 15, 2018	Bidders' Conference
May 22, 2018	RFP Update and Offer Submittal Webinar
June 21, 2018	DR Product Update Webinar
July 3, 2018	Offeror's Initial Offer Submittal Deadline to SCE
October 5, 2018	Target Date for SCE to issue Shortlist Notification
October 12, 2018	Offerors' Shortlist Acceptance Deadline
October 15, 2018	PSA Negotiation Period Begins
October 26, 2018	Offerors' Shortlist Deliverables Deadline
January 22, 2019	Commercial Lockdown Deadline
January 25, 2019	PSA Negotiation Period Ends
February 1, 2019	Offerors' Final Price Submittal Deadline
March 19, 2019	SCE's Target Date for Final Selection Notification
March 26, 2019	Deadline for Awarded Offerors to Execute PSAs
April 2019	Application Filing

B. Solicitation Structure

The format of the LCR RFP structure, detailed in SCE's Moorpark LCR Procurement Plan, was approved by the Energy Division and included an initial solicitation of indicative offers, negotiations on contract terms with "shortlisted" offers, a final price refresh of "shortlisted" offers, and an evaluation and final selection process.

This solicitation was structured as a Request for *Proposals*, as opposed to a Request for *Offers*, to open the resource and product types beyond the products contemplated in SCE's various term sheets and pro forma purchase and sale agreements ("PSAs"). SCE recognized the recent and substantial advancement of many technologies and the market indication of converting various traditional resource types into hybrid products (*e.g.*, lithium ion and fuel cell

hybrids), and as a result, did not want potential bidders to feel constrained to specific product types.

Below is a list of steps, in chronological order, that were used in the LCR RFP process:

1. Internal Preparation

As a result of the CEC Siting Committee's notice of its intent to issue a PMPD recommending denial of certification of the Puente project and the suspension of the CEC permitting process for Puente in October and November 2017, respectively, SCE proceeded with its LCR procurement planning process, which included:

- Finalizing all documents that were a part of the LCR RFP (*e.g.*, term sheets, pro forma PSAs, participants' instructions and submittal templates);
- Reviewing the LCR RFP details with internal and external stakeholders (external stakeholders included the IE, the CAM Group, and Commission staff;⁵³ the roles of each of the external stakeholders are described in Sections IV.H and IV.I);
- Communicating with the CAISO regarding LCR needs in light of the findings in its Moorpark Sub-Area Local Capacity Alternative Study, published on August 16, 2017;
- Early outreach to developers. SCE conducted outreach prior to the RFP launch due to potential siting and permitting challenges in the Goleta and Santa Clara areas and the relatively near-term LCR online deadline. Through these outreach efforts, SCE also explained that the intent of the RFP was to encourage bidders to provide innovative and commercially available products which might not have been defined by SCE's term sheets or pro forma PSAs.

⁵³ Throughout the LCR RFP process, SCE employed the use of an IE to ensure that all bidders received comparable and non-discriminatory treatment, and periodically consulted with the CAM Group and the Commission's Energy Division.

1 This outreach included: setting up the LCR RFP website and notifying those
2 on its 4,000+ email distribution list to visit and register on the website; issuing
3 a series of announcements as early as November 27, 2017 – three months
4 prior to official launch of the LCR RFP – alerting developers and other
5 stakeholders of the upcoming RFP; and hosting an in-person “Market
6 Awareness Conference” in Ventura on December 20, 2017 – two months prior
7 to the LCR RFP launch – with both developers and community stakeholders
8 in attendance.

9 **2. RFP Launch**

10 As discussed above, SCE created an LCR RFP website (hosted on
11 <http://scemoorparkgoletarfp.accionpower.com>) prior to launch, which included all of the
12 information that bidders needed to participate in the solicitation, including the RFP Instructions,
13 online tutorials, frequently asked questions (“FAQs”), and links to relevant external information.
14 SCE communicated the launch of the LCR RFP to market participants directly via a posting of
15 the launch announcement on the existing LCR website (with the announcement being “pushed”
16 by way of email to all registered website users), and a separate direct email to SCE’s extensive
17 email distribution list, which includes various service lists, including those for dockets involving
18 EE, DR and DG matters, to ensure parties beyond those initially registered on the RFP website
19 received the RFP launch announcement and related information. Prior to launch, and even after,
20 SCE encouraged many developers and community stakeholders to provide contact information to
21 be added to SCE’s distribution list and to register on the RFP website. SCE also issued a press
22 release which was run in industry publications. For additional information on bidder outreach
23 efforts see Section IV.D.

24 After the launch, SCE hosted a bidder’s conference to walk through the various
25 aspects of the solicitation, discuss its valuation approach, and respond to questions and concerns.
26 SCE also hosted separate webinars to provide additional information on the solicitation.
27 All materials from the bidders’ conference and webinars were made available on the LCR RFP

website. SCE also maintained a list of FAQs on its LCR RFP website. SCE's LCR RFP materials are included as Appendix D.

3. **Notice of Intent**

After reviewing the LCR RFP materials, bidders submitted an official nonbinding notification of which resources they intended to bid (*i.e.*, notice of intent ("NOI")). The NOI allowed SCE to gauge market interest in the LCR RFP and to organize its internal resources to efficiently manage the receipt of formal offers in the coming month. SCE received a significant amount of NOIs, which closely mirrored the offers that were eventually submitted into the RFP in the following month by the Initial Offer Submittal Deadline.

4. **Indicative Offers Submitted by Bidders**

Using the offer templates from the LCR RFP website, bidders submitted non-binding indicative offers. The indicative offers provided pricing that SCE used for shortlist notification. A secondary benefit of this process is that bidders could input their information directly into submittal templates that allowed SCE to identify anomalies that required additional information. SCE worked diligently with bidders to cure any deficiencies and get a complete and conforming set of offers in order to value the offers and create a shortlist.

5. **Shortlist Notification**

Based on shortlist criteria and valuation results (which included an evaluation based on quantitative and qualitative criteria, such as a strong preference for Preferred Resources and energy storage over GFG), SCE selected its shortlist in consultation with its IE and the CAM Group, and then notified bidders whether they had been shortlisted.

6. **Contract Negotiation**

Once the shortlist was determined, SCE and the bidders began negotiating the terms and conditions of the pro forma PSAs.

7. **Commercial Lockdown**

At commercial lockdown, all "commercial" terms were finalized (*e.g.*, contract quantity, term, location, operational attributes and restrictions), except for price.

1 These commercial terms describe a potential offer, and need to be finalized sufficiently early to
2 provide adequate time for proper valuation.

3 **8. Negotiation Deadline**

4 This deadline was the date by which all terms and conditions of the negotiated
5 PSAs had to be finalized and ready for execution. Agreement on a negotiated PSA was required
6 for bidders to submit final pricing.

7 **9. Final Binding Offer Submission**

8 Bidders submitted final binding prices based on previously negotiated PSAs.
9 Each bidder submitted final pricing on their shortlisted offer(s). Bidders that had shortlisted
10 offers were also invited to submit final pricing for offers they originally submitted into the RFP
11 that did not make it onto the shortlist, but that were based on the same or very similar pro forma
12 contract as the bidders' shortlisted offer's contract.

13 **10. Notice of Acceptance/Rejection**

14 SCE chose to either accept or reject offers based on its valuation and selection
15 results. After offer acceptance, SCE and the bidders prepared the final executable forms of the
16 contracts.

17 **C. Eligibility Requirements**

18 To be considered in the LCR RFP, a project was required to meet the following general
19 qualifications: (1) all projects had to either reduce load or otherwise interconnect at the Goleta
20 and Santa Clara A-Bank substations (or lower voltage substations connected to these A-Bank
21 substations) in Figure II-1 above; (2) IFOM projects had to apply, or have applied, for
22 interconnection to the CAISO grid or SCE's distribution system selecting Full Capacity
23 Deliverability Status ("FCDS"), qualifying the project to be counted for Resource Adequacy
24 ("RA"); (3) the projects had to be incremental (*i.e.*, new capacity); (4) all project proposals had
25 to have a contract delivery start date no later than March 1, 2021, and offer year-round delivery;
26 and (5) the projects must use proven, commercialized technology, and/or configurations.

1 **D. Bidder Outreach**

2 On November 27, 2017, notification of the launch of the LCR RFP was sent via an
3 announcements messaging system through the LCR RFP website, and emailed to more than
4 4,000 industry contacts. SCE also posted an announcement of the launch on the SCE website at
5 <https://www.sce.com/procurement/solicitations/lcr-rfp>, and notified CAM Group participants.
6 Finally, the LCR RFP website contained all solicitation documents, the schedule, FAQs, and a
7 tutorial on using the website. SCE also worked with local non-profits who hosted outreach
8 websites for local developers.

9 On December 20, 2017, SCE hosted a Market Awareness Conference to provide an
10 overview of the LCR RFP and to solicit feedback on the RFP process.

11 On March 15, 2018, SCE hosted a Bidders' Conference Webinar to provide an overview
12 of the LCR RFP, including eligibility requirements, contracting, valuation, selection, and
13 interconnection processes and requirements. The Bidders Conference presentation was also
14 posted on the LCR RFP website.

15 On May 22, 2018 and June 21, 2018, SCE hosted webinars on RFP updates and offer
16 submittal and DR product updates.

17 CPUC General Order 156 ("GO 156") contains "rules governing the development of
18 programs to increase participation of women, minority and disabled veteran business enterprises
19 ("WMDVBES") in procurement of contracts from utilities as required by Public Utilities Code
20 Sections 8281-8286." In recognition of GO 156, SCE continually seeks opportunities to build an
21 increased pool of diverse suppliers, including WMDVBE participants, in power procurement
22 activities. SCE encouraged WMDVBES to participate in the LCR RFP by including information
23 specific to WMDVBES in its LCR RFP bidder's instructions.

24 **E. Addressing Procurement and Development Challenges**

25 The LCR RFP presented some unique and new challenges to SCE's procurement process.

1 **1. Selecting LCR Projects That Will be Online by June 2021**

2 The Strata Saticoy IFOM energy storage project selected through the LCR RFP
3 will be interconnecting to SCE’s distribution system and delivering energy and capacity,
4 including RA, to both local loads on the distribution level and to the CAISO-controlled bulk
5 transmission grid. Most IFOM energy storage projects that bid into the LCR RFP entered the
6 Wholesale Distribution Access Tariff (“WDAT”) Queue Cluster study process, while others
7 leveraged the Independent Study Process (“ISP”). The Queue Cluster study process typically
8 requires at least two years to complete, from the time the interconnection request is received to
9 the time an interconnection agreement is executed. The ISP schedule typically spans at least one
10 year, however, most applications will not qualify for the ISP.⁵⁴ The entire interconnection
11 process – from the time an interconnection request is submitted until the project is physically
12 interconnected and approved to begin transmitting energy (and absorbing energy in order to
13 charge the project’s batteries, in the case of energy storage) – typically takes two to four years, or
14 more, depending on the associated interconnection voltage levels and the needed upgrades to
15 accommodate the new projects.

16 The relatively short time frame between the CEC Siting Committee’s indication
17 that it intended to recommend denial of the Puente project’s permitting in the Fall of 2017 and
18 the CAISO-determined LCR deadline in 2021, combined with the tariff-driven timelines of the
19 interconnection process, created a potential risk that projects would not be able to interconnect in
20 time to meet the June 2021 LCR need date. In response, SCE took measures to mitigate this risk,
21 along with others, including: (1) engaging in discussions with the CAISO on the LCR need
22 deadline, originally set at January 1, 2021, and later set to June 1, 2021, as peak load does not

⁵⁴ In order to qualify for the ISP, the applicant’s generating facility cannot be electrically connected to facilities required by earlier queued generating requests. Each ISP request is evaluated for electrical independence in relation to other interconnection requests in the electrical vicinity of the subject request. Given the fact that the RFP bidders were all bidding into the same electrical area made it difficult to obtain eligibility for the ISP.

1 occur in the winter and spring months; (2) requiring all projects to have entered the
2 interconnection process prior to the submittal of the respective offer into the LCR RFP, which
3 required significant financial commitments from the project developers in the face of uncertainty
4 around being awarded a final contract; (3) requiring all projects to substantiate their proposed
5 contract delivery start dates, as part of SCE’s viability assessment and due diligence, which
6 included for most bidders a requirement to enter into SCE’s transmission and distribution
7 (“T&D”) letter agreement process for advancing interconnection design, engineering, and
8 procurement; (4) requiring all projects to enter into SCE’s T&D distribution firm charging
9 service study process to assess potential upgrades which could mitigate charging constraints
10 identified in the interconnection process study results; and (5) encouraging bidders to request
11 additional charging constraint scenario analysis from SCE’s T&D group, which would help
12 assess any risk in meeting their proposed RA obligations.

13 **2. Meeting Energy Needs in Addition to Capacity Needs**

14 As discussed above in Section II.B. and as established in CAISO’s 2023 Long
15 Term Capacity Technical Report,⁵⁵ to address the Santa Clara LCR Contingency⁵⁶ there would
16 be a peak hour capacity need ranging from approximately 102 to 164 MW. These larger local
17 capacity needs have traditionally been met by generation resources, such as natural-gas, that are
18 not time- or use-limited and are capable of producing the required power for longer durations.
19 By this logic, if enough unrestricted resource capacity is procured to meet the peak hour need,
20 then the rest of the day’s lesser hourly capacity needs will also be met. However, with the rapid
21 adoption of energy limited Distributed Energy Resources (“DERs”), a system reliability need

⁵⁵ Appendix F, CAISO Documents, CAISO’s 2023 Local Capacity Technical Analysis, Final Report and Study Results, dated May 15, 2018 (also available at <http://www.caiso.com/Documents/Final2023Long-TermLocalCapacityTechnicalReport.pdf>).

⁵⁶ The most critical contingency for the Santa Clara sub-area is the loss of the Pardee - Santa Clara 230 kV line followed by the loss of Moorpark - Santa Clara 230 kV #1 and #2 lines (Santa Clara LCR Contingency), which could cause voltage collapse.

1 may no longer be solved by only procuring for the peak capacity need (MW) and the duration of
2 a capacity requirement must be considered.

3 For example, if the identified 102 MW need was for 6 hours (*e.g.*, a 612 MWh
4 need = 102 MW *6 hours), a procurement of 102 MW of RA-eligible (4-hour) energy storage
5 would only solve 408 MWh of the 612 MWh need. In summary, without accounting for the
6 energy need, an LCR procurement may seem sufficient when solving for capacity only; but the
7 actual energy need may not be met. Accordingly, SCE requested the CAISO provide the hourly
8 local capacity and energy need, including the duration and the time of day, which was then
9 published in the Supplemental Local Capacity Assessment for the Santa Clara Sub-Area report.⁵⁷
10 This ultimately allowed SCE to develop a portfolio of resources that met both the identified local
11 capacity and energy needs for the Santa Clara LCR area.

12 **F. Incrementality**

13 **1. Incrementality Framework**

14 The incrementality framework used in the LCR RFP is consistent with the
15 following principles adopted by the Commission in the Integrated Distributed Energy Resources
16 (“IDER”) proceeding:⁵⁸

- 17 • Ensure that customers are not paying twice for the same service;
- 18 • Ensure the reliability of a service;
- 19 • Not be unduly burdensome to participants;
- 20 • Be technology-neutral;
- 21 • Be fair and consistent;

⁵⁷ Appendix F, CAISO Documents, CAISO’s 2023 Local Capacity Technical Analysis, Supplemental Local Capacity Assessment for the Santa Clara Sub Area, dated June 18, 2018, at 3 (also available at <http://www.caiso.com/Documents/2023LocalCapacityTechnicalAnalysisfortheSantaClaraSub-Area.pdf>).

⁵⁸ D.16-12-036, Section 5.1.2, Addressing Incrementality and Double-Counting of Services, at 18-22.

- Recognize that a DER is eligible to provide multiple incremental services and be compensated for each service; and
- Be flexible and transparent to bidders.⁵⁹

LCR RFP offers were categorized into three tranches: (1) wholly incremental; (2) partially incremental; or (3) not incremental. The description for each category was developed in the IDER proceeding with input from the stakeholders in the Distribution Planning Advisory Group (“DPAG”), and approved by the Commission in Resolution E-4889, which approved SCE’s IDER RFO.⁶⁰ Some minor modifications were made to the examples within the various tranches with the objective of making it clearer to bidders what tranche their offer would fall into.

- Wholly Incremental: Offers that provide technologies and services not already being sourced or reasonably expected to be sourced through another utility procurement, program, or tariff, and that meet specific identified needs were categorized in Tranche One as “Wholly Incremental.”
 - For example, offers to install new BTM energy storage and distributed generation that were not accessing other available funding were assessed full incrementality value. The rationale for that assessment was due to the offers opting to not participate in Net Energy Metering (“NEM”) or in the Self Generation Incentive Program (“SGIP”), which would avoid the payment for a resource that may already be compensated by the utility for similar performance.
- Partially Incremental: Offers in which some portion of the technology or service is already incentivized through another authorized utility procurement,

⁵⁹ *Id.* at 18-19.

⁶⁰ The IDER Resolution required marketing to be part of the framework in IDER, but since this was not the case in the LCR RFP, and was not feasible for this solicitation, it was removed.

1 program, or tariff, and that meets specific solicitation needs were categorized
2 in Tranche Two as “Partially Incremental.” Only the portion of the offer that
3 provided material enhancements to the existing project (e.g., locational,
4 temporal, or increased performance certainty) was considered incremental.

- 5 ○ The rationale was not to prohibit a project from participating for the sole
6 basis that a portion of it has or will receive some compensation.

7 There may be additions or modifications to a project that may meet the
8 LCR need and that are not eligible for compensation elsewhere.

9 Examples of these offers include non-NEM generation at a site with
10 existing NEM generation, additional diagnostic devices added to EE
11 program measures that can ensure additional benefits, and shifting of
12 existing energy storage discharge at a different time to meet LCR need.

- 13 • Not Incremental: Offers that provide technologies or services already sourced
14 under another authorized utility procurement, program, or tariff, that meet the
15 identified need, and that provide no clearly discernable incremental value
16 beyond current offerings, were categorized in Tranche Three as “Not
17 Incremental.” These offers were not considered, and, as such, were not
18 included in the valuation and selection process.

- 19 ○ Any offer based on existing performance without any modifications does
20 not contribute to the LCR need and is therefore not incremental.

21 Examples of this include NEM solar projects, EE installations without
22 modifications, and existing energy storage systems without any changes
23 to its capacity or discharge hours to meet LCR need.

1 **G. Consultation with the CAISO**

2 Pursuant to D.13-02-015⁶¹ and in order to ensure a viable and successful LCR
3 procurement, SCE maintained communications with the CAISO throughout its procurement
4 process to ensure selected resources collectively met the identified LCR need as discussed in
5 Chapter II. This included consulting with the CAISO on the shortlist and final selection to
6 ensure there were no issues with the resource mix and that the LCR need could be met with the
7 selected resources.⁶²

8 SCE consulted with the CAISO on the following technical and commercial matters
9 related to this RFP:

- 10 • **June 1, 2021 Commercial Operation Date:** LCR RFP resources that are online by
11 June 1, 2021 count towards meeting the 2021 local capacity requirements; therefore
12 offers that demonstrate sufficient evidence of coming online by June 1, 2021 were
13 prioritized in the LCR RFP.
- 14 • **CAISO Deliverability:** Participating LCR RFP resources had to request FCDS
15 from the CAISO.
- 16 • **Minimum 10 MW Hourly Dispatch Unit:** For energy storage resources within the
17 portfolio, the CAISO accepted a minimum hourly dispatch unit of 10 MW blocks as
18 shown in Table IV-2 below. In other words, an energy storage resource's, or

⁶¹ D.13-02-015 at 75 (“We will require SCE to consult with the ISO regarding ISO performance characteristics (such as ramp-up time) for local reliability. In its application to procure specific resources to meet local reliability needs (discussed herein), SCE shall provide documentation of such efforts and how SCE meets ISO performance requirements.”). *See also id.* at 131-132 (OP 4 a-d) and 136 (OP 14).

⁶² SCE provided the CAISO four resource portfolios, including its final selection set, to review prior to the receipt of final offers to ensure that there were no potential technical overrides or no-solution portfolios that SCE needed to be aware of when developing its final selection. As part of the submission, the CAISO reviewed SCE’s proposals of how the resources can be dispatched and charged to meet the hourly LCR need. This included the CAISO accepting the minimum 10 MW hourly dispatching of energy storage resources.

aggregate set of resources’, MW output could be adjusted up or down in each hour by multiples of 10 MW, with 10 MW being the minimum unit.

Table IV-2
Example of Minimum Hourly Dispatch Unit of 10 MW

Energy Storage Output (MW)	Hour Ending						
	15	16	17	18	19	20	21
Example 1	10.0	30.0	40.0	40.0	10.0	20.0	10.0
Example 2	10.0	10.0	10.0	0.0	0.0	0.0	10.0

- **CAISO Validation of Final Portfolio:** Based upon the methodology described in its Supplemental Assessment,⁶³ the CAISO reviewed SCE’s final portfolio, which included verification in power flow analysis, and confirmed that the portfolio could meet the identified LCR needs.⁶⁴

H. Role of IE and CAM Group

Pursuant to applicable Commission decisions, SCE engaged an IE and consulted with its CAM Group throughout the LCR RFP process.

1. Engagement of IE

D.08-11-008 requires an IE for all competitive solicitations that involve affiliate transactions, utility-owned or utility-turnkey offers, and for all solicitations that seek products two years or greater in duration, regardless of who participates.⁶⁵ In compliance with this requirement, SCE recommended Sedway Consulting, Inc. (“Sedway Consulting”) as the IE for SCE’s 2018 LCR RFP. Sedway Consulting is currently in SCE’s pre-qualified IE pool and has prior experience developing and running solicitations in other parts of the country. Sedway

⁶³ Appendix F, CAISO Documents, CAISO’s 2023 Local Capacity Technical Analysis, Supplemental Local Capacity Assessment for the Santa Clara Sub Area, dated June 18, 2018, at 6 (also available at <http://www.caiso.com/Documents/2023LocalCapacityTechnicalAnalysisfortheSantaClaraSub-Area.pdf>).

⁶⁴ See Appendix F, CAISO Documents, CAISO Letter to SCE re CAISO’s Assessment of the Santa Clara Area Resource Scenarios Submitted by SCE, dated March 13, 2019.

⁶⁵ D.08-11-008 at 39-40 (OP 2).

1 Consulting also has prior experience overseeing the negotiation and evaluation of energy storage
2 and other Preferred Resources, most recently though SCE's 2016 Energy Storage & Distribution
3 Deferral RFO, the Second Preferred Resource Pilot RFO, and the 2013 LCR RFO. On
4 December 6, 2017, SCE sought Energy Division approval to use Sedway Consulting as the IE
5 for the LCR RFP. Energy Division approval was received on December 8, 2017.

6 a) IE Participation in the Development of the RFP, Bid Solicitation, and Bid
7 Selection Process

8 Sedway Consulting was engaged to ensure that the solicitation process
9 was conducted fairly to all qualified bidders and that no SCE affiliate had an undue advantage
10 over non-affiliates in the solicitation.⁶⁶ Sedway Consulting was required to make a
11 determination as to whether SCE's final selection was fair and free from anti-competitive
12 behavior. Sedway Consulting reviewed the LCR RFP documents, outreach efforts, evaluation
13 processes, participated in the Market Awareness Webinar, Bidders' Conference Call Webinar,
14 and monitored communication with bidders, as well as SCE's participation with Commission
15 staff. SCE provided Sedway Consulting access to all necessary materials and meetings in order
16 for Sedway Consulting to monitor the consistency and fairness of the negotiated positions and
17 communicated messages. Sedway Consulting also reported its observations throughout the RFP
18 process to the Energy Division and SCE's CAM Group. Finally, Sedway Consulting completed
19 the CPUC's IE Report Template at the conclusion of SCE's selection and award process. The IE
20 Report has been provided to the Energy Division, and the public and confidential portions of the
21 report are included as Appendix C.

22 **2. Consultation with CAM Group and Energy Division**

23 D.06-07-029 adopted a CAM that allows the benefits and net costs of new
24 generation that meets specific needs to be distributed among all benefitting customers.

⁶⁶ No SCE affiliate participated in SCE's LCR RFP.

In Chapter VIII.B, SCE describes the cost allocation treatment for the selected LCR resource. Consistent with Public Utilities Code §365.1(c)(2)(A)-(B), prior Commission decisions,⁶⁷ and D.13-02-015,⁶⁸ which authorized the LCR procurement to benefit all customers in the SCE service area, SCE requests that its LCR procurement cost be allocated to all customers within the SCE service area consistent with CAM principles. See Chapter VIII for further discussion on the recommended allocation of net costs and benefits. As has been SCE's practice, SCE consulted with its CAM Group on a regular basis prior to, during, and after the close of the LCR RFP. Table IV-3 lists SCE's consultations with the CAM Group and the topic of each consultation.

***Table IV-3
SCE's CAM Group Consultation***

Date of Meeting	Description of CAM Group Meeting
November 15, 2017	Moorpark LCR Need and Goleta Resiliency Update
February 20, 2018	Approval to Launch Moorpark Local Capacity Requirements and Goleta Resiliency Request for Proposals (LCR RFP)
May 23, 2018	2018 LCR RFP Update
October 3, 2018	Moorpark Local Capacity Requirements and Goleta Resiliency Request for Proposals (2018 LCR RFP) Shortlist Recommendation
March 15, 2019	Moorpark Local Capacity Requirements/Goleta Resiliency Request for Proposals (2018 LCR RFP) & the Aliso Canyon Energy Storage 2 Request For Offers (ACES 2 RFO) Final Selection Portfolio Recommendation

SCE also briefed various members of Energy Division throughout the process on different aspects of the 2018 LCR RFP, including the shortlist and final selection.

I. Community Engagement

Considering the strong community opposition to the Puente project after its selection through the 2013 LCR RFO, SCE sought to engage with and seek feedback from local communities in the Moorpark sub-area throughout the 2018 LCR RFP. As a result, SCE initiated meetings with stakeholders across Santa Barbara and Ventura Counties and neighboring

⁶⁷ See D.06-07-029, D.07-09-044, D.08-09-012, D.11-05-005, and D.13-02-015.

⁶⁸ D.13-02-015.

1 cities prior to the launch of the LCR RFP, and after certain major LCR RFP milestones.
2 These stakeholders included, but were not limited to, government officials, government staff,
3 local university staff, and local non-profits. At each meeting, the appropriate SCE subject matter
4 experts met with community stakeholders to solicit and consider feedback regarding SCE's
5 Moorpark LCR Procurement Plan; explain the RFP structure and the opportunity for innovative
6 proposals; provide insights on decisions made at each RFP milestone; offer information on LCR
7 needs, Goleta resiliency objectives, and the solicitation process; and to consider feedback and
8 answer questions. It was clear that community stakeholders were, and are, concerned about
9 electrical grid resiliency and clean energy resources for their communities. Specifically, there is
10 strong opposition to GFG and concern about the lack of solar development in the local area.
11 SCE continues to follow-up with the interested community stakeholders, sharing ongoing efforts,
12 strategies, and projects, outside of the LCR RFP process, aimed at fostering additional renewable
13 resource and clean energy development within the area. Due to the receipt of sufficient
14 competitively-priced clean energy offers, no GFG projects were selected through the RFP.

15 The following table catalogues the meetings between SCE and community stakeholders.
16 Note this table does not include the RFP bidders' conferences (discussed in Section IV.D of this
17 Application) targeted at project developers but to which community stakeholders were also
18 invited.

Table IV-4
Meetings with Community Stakeholders

Meeting Title	Date of Meeting	Meeting Purpose
Goleta Resiliency Plan and Moorpark LCR RFP Kick-Off	December 11, 2017	To explain SCE's action plan and solicit feedback from community stakeholders ⁶⁹ for consideration prior to submitting updated LCR procurement plan to Energy Division.
CleanEnergy805 Workshop – Goleta	March 13, 2018	CleanEnergy805-sponsored workshops to help property owners and developers navigate the proposal process for SCE projects that will build renewable energy resources in Southern Santa Barbara County and Western Ventura County.
CleanEnergy805 Workshop – Ventura	March 15, 2018	
Summary of LCR RFP Offers Received	July 16, 2018	To provide a high-level review of RFP offers received to community stakeholders. ⁷⁰
Santa Barbara City Council Meeting on Grid Resiliency, Wildfire Mitigation and PSPS	July 31, 2018	To provide a brief RFP and resiliency overview to Mayor and Council members, and to field related questions.
Goleta City Council Meeting on Grid Resiliency, Wildfire Mitigation and PSPS	August 21, 2018	To provide a brief RFP and resiliency overview to Mayor and Council members, and to field related questions.
Summary of LCR RFP Shortlist Portfolio	October 15, 2018	To provide an overview to community stakeholders ⁷¹ , regarding SCE's 2018 LCR RFP shortlist selection and to frame next steps in the RFP procurement process.
CleanEnergy805 Meeting	November 19, 2018	To present SCE's proposed Green Energy Programs tariff options, and answer questions regarding the LCR RFP and discuss the community's Goleta resiliency goals.
Summary of LCR RFP Final Offer Selection	April 29, 2019	Provide an overview to community stakeholders ⁷² , regarding SCE's LCR RFP final offer selection to meet the Local Capacity Requirements in the Moorpark sub-area (the Goleta and Santa Clara electric systems).

⁶⁹ Community stakeholders included: University of California Santa Barbara Staff; Chamber of Commerce members from Santa Barbara, and Carpinteria Valley; County of Santa Barbara Supervisors and Staff; Mayor, Council Members, and Staff from City of Goleta; Council Members
(Continued)

Continued from the previous page

and Staff from the City of Santa Barbara; City of Carpinteria Staff; and Representatives from Community Environmental Council, Sierra Club, CAUSE and World Business Academy.

⁷⁰ Community stakeholders included: University of California Santa Barbara Staff; County of Santa Barbara Supervisors and Staff; Staff from County of Santa Barbara; City of Santa Barbara; City of Goleta; City of Carpinteria; and representatives from Community Environmental Council, CAUSE, and World Business Academy.

⁷¹ Community stakeholders included: University of California Santa Barbara Staff; representative from the Office of Assembly member Monique Limon and Office of Senator Hannah-Beth Jackson; County of Santa Barbara Supervisor and Staff; Council Member and Staff from City of Goleta; staff from the County of Santa Barbara; Mayor Pro Tem from the City of Oxnard; and representatives from Community Environmental Council and World Business Academy.

⁷² For the Summary of LCR RFP Final Offer Selection meeting scheduled for April 29, 2019, SCE will invite the community stakeholders who have participated in the previous meetings listed in Table IV-4.

V.

2018 LCR RFP PARTICIPATION

A. Summary of Participation

This Chapter provides an overview of the following steps in the LCR RFP: (1) indicative offers submitted by bidders; (2) shortlist notification; (3) contract negotiations; and (4) final binding offers submitted.

1. Indicative Offer Submittal

SCE received 341 complete and conforming indicative offers representing approximately 1,300 MW of potential capacity. A summary of the indicative offers is provided in the table below.

***Table V-5
Summary of Complete and Conforming Indicative Offers By Offer Type***

Offer Type	Number of Bidders	Number of Offers
Energy Storage (ES) (IFOM)		183
Permanent Load Shift BTM		34
DR		28
Fuel cells BTM		20
Solar-ES Hybrid (IFOM)		18
CHP		15
CHP Nat Gas (BTM)		12
Solar ES		9
GFG Peaker-ES Hybrid		8
Fuel Cell-ES Hybrid (IFOM)		4
Fuel Cells (IFOM)		4
GFG Peaker (IFOM)GFG		3
Renewable DG		2
Renewable Gen (IFOM)		1
Total		341

Many of the indicative offers required curing through the complete and conforming process, after which less than 70 MW of projects were eliminated from the RFP. The eliminated projects could not be cured for various reasons, including: (1) not having a

completed interconnection application by the offer due date; (2) not being commercially viable; (3) misclassified resource type (eliminated a DR proposal and reclassified under Fuel Cells); and (4) not incremental.

2. Shortlist Notification

As discussed above, SCE removed some of the projects from shortlist consideration because they did not meet the RFP requirements, ultimately resulting in 323⁷³ conforming indicative offers from ■■■ bidders. Given the number of indicative offers received, SCE decided to shortlist specific offers comparing the best valued offers by bidder. Bidders with shortlisted offers were notified that they would be eligible to submit final pricing for their specific shortlisted offer(s), and that SCE would allow up to fifteen (15) commercial term⁷⁴ variations for each specific shortlisted offer.⁷⁵ The rationale behind this practice is: (1) offers were likely going to change throughout the negotiation process; (2) the main measure of workload for the SCE team is the bidder/product combination, as each combination requires a separate document negotiation; and (3) the need to limit the number of offers considering some of the interconnection risks identified in Chapter IV.E.1 above, while maintaining a competitive solicitation process. SCE used its Least-Cost, Best-Fit methodology to determine which indicative offers made the shortlist, ultimately shortlisting approximately 500 MW of projects (which represents approximately 1,800 MWh of LCR energy) representing three-times the amount of LCR need.

⁷³ SCE actually valued 325 offer workbooks, however one seller submitted two offers using two mutually inclusive workbooks each. In summary, SCE received 325 workbooks that represented 323 offers.

⁷⁴ The commercial terms are defined as: VOM (\$); VARC (\$); Interconnection Upgrades Cost Cap (\$); Expected Initial Delivery Date (“EIDD”); contract term length; and any operational parameters.

⁷⁵ The exception being the ES - RA with Put product type where counterparties were allowed to submit RA-only product type. The rationale for this is that there is very little incremental effort and overhead in negotiating an RA-only product type if an RA with Put product type is being negotiated.

1 **3. Contract Negotiations**

2 Shortlist notification was made on October 5, 2018. Once the shortlist was
3 determined, SCE and bidders began negotiating the terms and conditions of contract forms based
4 on SCE's published pro forma contracts. During the negotiation phase, various counterparties
5 withdrew their offers for various reasons. The table below summarizes these withdrawals and
6 whether the bidders' projects were being considered in the LCR RFP or both the LCR RFP and
7 the ACES 2 RFO, with comments provided by the respective bidders as to the reason for the
8 withdrawals.

***Table V-6
Projects That Withdrew from the LCR RFP***

Seller	Project	Capacity (MW)	Reason for Not Being Considered

* Save Open space and Agricultural Resources ("SOAR") is a voter-approved initiative that inhibits development of non-approved uses (*e.g.*, energy storage) in certain zoned areas of Ventura County. Ventura County officials have stated obtaining an exemptions/waiver for a re-zoning would be challenging within the RFP timeline, which could require a vote of the people.

4. Final Binding Offer Submission

As previously explained, in addition to the 2018 LCR RFP for local capacity and energy in the Moorpark sub-area, SCE was concurrently conducting the ACES 2 RFO for energy storage resources located south of Path 26 to meet the requirements of Senate Bill (“SB”) 801.⁷⁶ Pursuant to SB 801 and Resolution E-4937, SCE contracted for projects in targeted locations that provide value in alleviating grid constraints and demand on the natural gas system, specifically the Moorpark sub-area of the Big Creek/Ventura local reliability area. As mentioned in Chapter VI.B.1, because the two procurement efforts were concurrent and seeking projects in the same locations, SCE encouraged bidders that bid projects into the LCR RFP to bid those same projects into the ACES 2 RFO. The result was most bidders who bid into the LCR RFP also bid into the ACES 2 RFO. Consequently, most of the shortlisted ACES 2 RFO projects were also shortlisted in the LCR RFP. This allowed SCE to consider offers from both the ACES 2 RFO shortlist and the LCR RFP shortlist when developing a total solution for the Moorpark sub-area capacity and energy needs, while also avoiding double procurement and minimizing customer impact. It is important to note that the ACES 2 RFO’s final offer evaluation utilized the same price forecasts and valuation methodologies as the LCR RFP’s final offer evaluation, described in VI.A, to ensure an equitable evaluation.

After negotiations, remaining bidders submitted final pricing for their final negotiated contracts. SCE received 96 final offers in the LCR RFP on February 1, 2019 from ■■■ bidders. As shown in the Table V-6, seven offers from ■■■ bidders withdrew after final offer submittal. This resulted in 89 offers from ■■■ bidders that were considered to determine a solution to the LCR need. These offers are summarized in Table V-7 below.

⁷⁶ On October 14, 2017, Governor Brown signed Senate Bill 801 into law. SB 801 requires the Commission to direct SCE to deploy, pursuant to a competitive solicitation, a minimum aggregate total of 20 MW of cost-effective energy storage to help address electrical system operational limitations resulting from reduced gas deliverability caused by the partial shutdown of the Aliso Canyon natural gas storage facility.

Table V-7
Summary of Final Offers in LCR RFP That Can Count Toward The LCR Need

Resource Type	Bidder Name	Number of Offers		Maximum Capacity Offered (MW)	
		Goleta	Santa Clara	Goleta	Santa Clara
DR					
ES-Put					
ES RA-Only					

Of the shortlisted offers in both the LCR RFP and the ACES 2 RFO, only two projects bid only into the LCR RFP:

VI.

2018 LCR RFP VALUATION PROCESS

As described in D.04-12-048, SCE used a Least-Cost, Best Fit (“LCBF”) methodology to value and award contracts in the LCR RFP. This chapter is comprised of two main sections: (A) a description of SCE’s valuation and selection methodology; and (B) a discussion of the valuation and selection results.

A. Valuation & Selection Methodology

1. Overview

SCE employed its LCBF principles in the evaluation process for the LCR RFP. SCE’s LCBF methodology considers both the quantitative (quantifiable benefits and costs) and qualitative (non-quantifiable) attributes associated with each offer. The LCBF methodology allowed SCE to carefully consider all key aspects of each offer to select the offer(s) that produce a portfolio that meets the identified LCR need and optimizes the quantitative and qualitative benefits to customers.

SCE’s RFP evaluation process involved a two-step LCBF process that included: (1) an initial evaluation and shortlist selection, including a process to ensure the conformity of the indicative offers to the LCR RFP requirements, which led to narrowing down the indicative offers to a smaller set of offers with which SCE would negotiate final terms and conditions; and (2) a final evaluation and selection process where SCE ultimately selected resources to solve the identified Moorpark sub-area LCR need.

Each step of the two-step LCBF process included at least three sub-steps: (1) an initial conformance screen; (2) a quantitative valuation (Least Cost); and (3) a selection of offers with consideration of qualitative factors (Best Fit). During the initial screen, each offer was reviewed for completeness and conformity to the solicitation protocol. SCE then calculated the quantitative components of each complete and conforming offer by calculating each offer’s net present value (“NPV”). The NPV analysis entails: (1) projecting various benefits and costs streams over the life of the offer, (2) applying time value of the money, and (3) estimating total

NPV as present value of benefits minus present value of costs. In the final step, SCE, in conjunction with the IE, considered each offer's qualitative components along with quantitative results during both the shortlist and final selection processes. Both the quantitative and qualitative components of the evaluation are described in the following sections.

2. Least-Cost, Best-Fit Approach

a) Quantitative Factors: Benefits

SCE developed various market price forecasts using proprietary models for ascribing value to attributes such as RA capacity, electrical energy, and Ancillary Services. The quantities of these attributes were estimated based on offer specifications, guidance from the Commission, CAISO rules, and dispatch models or generation profiles. A detailed description of the benefits that were considered are described below.

(1) Resource Adequacy Benefit

The RA quantity attributed to each offer was established under the guidance of current net qualifying capacity ("NQC") counting rules. If an offer's operational capabilities generally align with a category described by the Commission for RA counting rules, the rules were directly applied. When no such category was identified or clear, SCE used program/technology specific studies/proceedings to estimate the contribution of that resource towards RA requirements. Resources that act as load reducers and cannot be represented on a supply plan received adjustments to their RA quantity benefits for avoided transmission and distribution losses and avoided RA reserve margin procurement requirements. The RA benefit for an offer was the offer's estimated RA quantity, described above, multiplied by an RA price forecast.

(2) Net Day-Ahead, Real-Time Energy Benefit

To calculate the Net Day-Ahead, Real Time Energy benefits, SCE produced forecasts for energy prices and energy delivery (or load reduction) for each offer. The energy price forecast was a combination of market data and fundamental prices produced by a security-constrained dispatch model. The energy delivery for must-take resources was based

on each offer's expected generation delivery or load reduction profile. For behind-the-meter-load reducing resources and distribution connected IFOM DG, the appropriate avoided transmission and distribution losses are considered. For dispatchable resources, operations of the resource were projected using a marginal economic dispatch principle based on the offer's operating characteristics, operating costs, and market services offered. The offers that acted as load reducers received adjustments to their energy quantity benefits to reflect avoided losses. For IFOM energy storage, the operational profile from the economic dispatch model included the offer's expected discharging and charging profile. The expected energy benefit was calculated by multiplying the forecasted energy prices with the corresponding expected energy deliveries.

(3) Ancillary Services Value Benefit

To calculate the Ancillary Services benefit, SCE produced forecasts for Ancillary Services prices and Ancillary Services capacity awards for each offer that offered Ancillary Services. If the offer could provide Ancillary Services, then the same methodology as the energy forecast in Section VI.A.2.a)(2) was employed to co-optimize both the amount of energy and Ancillary Services an offer can provide. The Ancillary Services value of an offer is the forecasted quantity multiplied by the SCE internal AS price forecast.

(4) Renewable Energy Credit Benefit

The Renewable Energy Credit ("REC") benefit amount for each eligible renewable DER is the quantity of RECs an offer can provide in reducing SCE's Renewables Portfolio Standard ("RPS") compliance requirements. SCE developed its REC price forecast using a combination of third-party vendors' outlooks of REC prices and SCE's own evaluation of REC prices from its RPS portfolio. Accordingly, because SCE has a long REC position, the price of RECs employed in the quantitative assessment was [REDACTED].

b) Quantitative Factors: Costs

The quantitative factors considered in the valuation process included the following costs.

1 (1) Contract Payments

2 The contract costs were composed of capacity payments and/or
3 energy payments, *i.e.*, an offer's fixed costs and/or variable contract costs. Contract payment
4 costs based on energy payments were calculated from each offer's energy price (\$/kWh) and its
5 expected generation profile (kWh). Contract payment costs based on capacity payments are the
6 offer's monthly contract capacity (kW) multiplied by its respective monthly capacity price
7 (\$/kW-mo).

8 (2) Debt Equivalence Cost

9 Debt equivalence is the term used by credit rating agencies to
10 describe the fixed financial obligation resulting from long-term purchased power contracts.
11 Pursuant to D.04-12-048, the Commission permits the investor-owned utilities ("IOUs") to
12 recognize in their valuation process the costs associated with the effect that debt equivalence
13 could have on the IOU's credit quality and cost of borrowing. Additionally, D.08-11-008
14 authorized the IOUs to continue recognizing the balance sheet impact of debt equivalence when
15 valuing power purchase agreements. Accordingly, SCE considers debt equivalence in its
16 quantitative evaluation.

17 (3) Transmission Upgrade Costs

18 The transmission network upgrade costs are the dollar amount that
19 a bidder expects to initially pay out of pocket for certain transmission network upgrades that may
20 qualify for reimbursement from SCE. These costs may include reliability network upgrade costs
21 and local delivery network upgrade costs. Bidders should base this total dollar amount on the
22 latest interconnection study applicable to their project. If no study exists, then the amount should
23 be based on a qualified interconnection specialist's/consultant's estimation of said costs.
24 The cost that is entered into the offer workbook will be used in the offer's quantitative
25 assessment.

1 c) Qualitative Assessment & Factors

2 As discussed above, SCE considers qualitative characteristics of an offer
3 in determining the short list and final selection. The following are some of the more salient
4 qualitative factors considered during the evaluation of LCR offers:

5 (1) Project Viability

6 For project viability SCE considered five components:

- 7 • Reasonableness of Commercial Online Date – This was the
8 first and most important component of SCE’s viability
9 assessment. All developers and associated projects were
10 assessed utilizing interconnection study results and analysis,
11 and the developers’ plans to ensure that appropriate permits
12 could be expected to be obtained so that COD dates could
13 reasonably meet the near-term LCR deadline (June 1, 2021).
14 Relatedly, SCE expressed a preference for early online dates.
- 15 • Company project development experience— The company
16 and/or the development team has completed two or more
17 projects of similar/any technology within the same product
18 type (renewable-renewable or DR - DR; not renewable - DR)
19 and similar or larger capacity.
- 20 • Operation and maintenance experience— The company,
21 development team, or subcontractor has experience with two or
22 more projects of similar/any technology within the same
23 product type (renewable-renewable or DR - DR; not renewable
24 - DR) and capacity.
- 25 • Technical feasibility— Project will use a commercialized
26 technology solution that is currently in use at a minimum of
27 two operating facilities of similar or larger capacity (power and

energy should be considered for storage solution).

Proposed technology solution may differ slightly from the one in operation (*e.g.*, modest upgrades).

- Resource sufficiency—Bidder strongly demonstrates that its project can support the delivery profile of its offer (capacity (MW) and/or production (MWh)).

(2) Location of Project in a Disadvantaged Community (“DAC”)

Disadvantaged Communities, or DACs, are a designation originally created to help guide investment of funds from the Greenhouse Gas Reduction fund, but the use cases have expanded and been standardized. Widespread application of the DAC designation and the CalEnviroScreen tool (a tool developed by CalEPA to identify DACs, currently in version 3.0) are now used in many forums including the CPUC, the California Air Resources Board (“CARB”), and the CEC. SCE considered these attributes when comparing offers.

(3) Preferred Resource

To the extent possible, SCE considered the CPUC’s preferred loading order when comparing offers of similar quantitative value.

(4) Contribution to Santa Barbara/Goleta Area Resiliency Objectives

Santa Barbara/Goleta-area resiliency was not a requirement objective of the RFP, but was considered when considering offers. As such, SCE considered each offer’s potential contribution to help alleviate the Santa Barbara/Goleta area resiliency objective.

B. Valuation and Selection Results

1. Overview

As explained in Chapter V.A.4 above, because the LCR RFP and the ACES 2 RFO were run concurrently and seeking projects in the same Moorpark sub-area locations, SCE encouraged bidders that bid projects into the LCR RFP to bid those same projects into the ACES

2 RFO. The result was that most bidders who bid into the LCR RFP also bid into the ACES 2 RFO. Consequently, most of the shortlisted ACES 2 RFO projects were also shortlisted in the LCR RFP. This allowed SCE to consider offers from both the ACES 2 RFO shortlist and the LCR RFP shortlist when developing a solution for the Moorpark sub-area LCR capacity and energy needs while avoiding double procurement and minimizing customer impact. As a result of including the ACES 2 RFO shortlisted offers in the determination of an LCR solution, SCE received 89 offers from ■ bidders as part of the final selection set to meet LCR needs in the Moorpark sub-area. The term lengths of the final offers ranged from ■ years with offers having projects commencing operations as early as ■ and ending as late as ■. Each of the 89 final offers went through the evaluation process described in Section VI.A. above. A summary of the final offers SCE considered when determining a solution to the LCR need is summarized in Table VI-9 below.

2. Meeting Both LCR Capacity and Energy Needs

In order to fully assess the efficacy of SCE's LCR selections, it is necessary to understand the LCR needs that SCE was trying to meet. First, as explained in the introduction, pursuant to D.13-02-015 SCE is authorized to procure up to 278 MW⁷⁷ of resources in the Moorpark sub-area to meet LCR needs. As discussed in Section II.B.1, the CAISO's Supplemental Local Capacity Assessment for the Santa Clara Sub-Area ("CAISO Supplemental Report"), which supplements the 2023 Local Capacity Technical Analysis for the Santa Clara Sub-Area, identified the need for both incremental RA capacity (power in MW) *and* energy (MWh) in the Santa Clara sub-area of the Moorpark sub-area (which encompasses both the Santa Clara and Goleta A-Systems) to meet LCR needs.⁷⁸ The CAISO's analysis resulted in a peak

⁷⁷ 278 MW represents the 290 MW initially authorized in D.13-02-015, less the 12 MW of Preferred Resources that were approved by D.16-05-050.

⁷⁸ Appendix F, CAISO Documents, CAISO's 2023 Local Capacity Technical Analysis, Supplemental Local Capacity Assessment for the Santa Clara Sub Area, dated June 18, 2018, at 8 (also available at <http://www.caiso.com/Documents/2023LocalCapacityTechnicalAnalysisfortheSantaClaraSub-Area.pdf>).

1 need of 102-164 MW of capacity.⁷⁹ In order to determine the energy need, SCE used the CEC
2 load shape for the Santa Clara sub-area⁸⁰ and the hourly analysis template provided by the
3 CAISO⁸¹ (both of which are included in the CAISO's Supplemental Report) to calculate an
4 energy need of approximately 602 MWh (to meet the entire eight-hour energy need).⁸²
5 The assessment also determined that resources located at Goleta are more effective than those
6 located at Santa Clara.⁸³ Specifically, if a distribution connected resource feeds into the Santa
7 Clara A-bank Substation, that resource would have an effectiveness of 74% as compared to an
8 effectiveness of 100% if connected into the Goleta A-bank Substation.⁸⁴ These CAISO
9 effectiveness factors were defined in the CAISO Supplemental Report and are summarized in
10 Table VI-8 below.⁸⁵ These factors were also part of the calculation of each offer's LCR MWh
11 contribution and ultimately embedded in the ranking of the offer stack.

⁷⁹ *Id.*

⁸⁰ *Id.*, Attachment, Slide Deck – Sent to SCE on May 14, 2018 (Revised), at slide 10.

⁸¹ *Id.*, Attachment, Slide Deck – Sent to SCE on May 14, 2018 (Revised), at slide 11.

⁸² In the CAISO Supplemental Report, the CAISO developed the load shape for the Santa Clara sub-area based upon the CEC forecast load shape for the entire SCE area and concluded that the duration of local capacity need is approximately eight (8) hours between hour-ending 15 to hour-ending 22 Pacific Prevailing Time. *Id.* at 8. The CAISO permitted SCE to fill the eight hour energy need with four-hour resources that could be dispatched in 10 MW blocks. *See* CAISO Letter to SCE re CAISO's Assessment of the Santa Clara Area Resource Scenarios Submitted by SCE, dated March 13, 2019, at 2.

⁸³ Appendix F, CAISO Documents, CAISO's 2023 Local Capacity Technical Analysis, Supplemental Local Capacity Assessment for the Santa Clara Sub Area, dated June 18, 2018, at 6 (also available at <http://www.caiso.com/Documents/2023LocalCapacityTechnicalAnalysisfortheSantaClaraSub-Area.pdf>).

⁸⁴ The CAISO's effectiveness factor accounts for locational effectiveness in addition to the project's ability to provide reactive power. All LCR RFP offers were interconnected to SCE's sub-transmission or distribution system (not the transmission network), and thus, based on the CAISO's effectiveness factors, are not assumed to provide reactive power support to the transmission system. For example, a 10 MW resource that is connecting to a distribution circuit that feeds up to the Santa Clara 220kV/66kV Substation is assumed to not be able to provide reactive power and accordingly is assumed to have a unity power factor. Therefore, this resource is viewed to have an effective LCR capacity of 7.4 MW when being counted toward the LCR need (both energy and power).

⁸⁵ Appendix F, CAISO Documents, CAISO's 2023 Local Capacity Technical Analysis, Supplemental Local Capacity Assessment for the Santa Clara Sub Area, dated June 18, 2018, at 6 (also available at
(Continued)

Table VI-8
LCR Effectiveness Factors

Location of new resource(s)	Reactive Power Capability	
	0.95 lead/lag power factor range	Unity Power Factor
Goleta 66kV	1.20	1.00 (reference)
Santa Clara 66 kV	0.95	0.74

In summary, the LCR need requires a procurement that solves both energy and capacity (power) deficiencies. This requirement, combined with the emergence of energy limited DERs, resulted in the procurement objective now being twofold – SCE must procure a portfolio that is able to meet the system’s peak (i.e., capacity) and is also able to provide sufficient energy at all times of the day. Historically, when procuring for capacity needs for a reliability event, solutions such as GFG resources were assumed to be able to provide the required capacity for as long as the system operator needed during the reliability event. However, with a solution that can now be comprised of energy-limited resources, the procurement can no longer simply rely on capacity alone to solve the identified need. The implication of this transformation is that the main objective of the procurement becomes ensuring it results in sufficient energy and capacity. Accordingly, SCE normalized each qualifying offer’s NPV by its energy contribution to the need in order to ensure that the selected resources provide the best value per unit of need met. Therefore, all offers were ranked by the metric NPV per LCR MWh contribution ($[Net\ Present\ Value] / [MWh\ Contribution\ to\ the\ LCR\ Need]$).

3. Viability Assessment to Meet 2021 LCR Needs

As previously explained, the Moorpark sub-area includes the Ormond Beach and Mandalay generating stations, which are OTC facilities that are scheduled to shut down by 2021.

Continued from the previous page

<http://www.aiso.com/Documents/2023LocalCapacityTechnicalAnalysisfortheSantaClaraSub-Area.pdf>.

1 The loss of these OTC units combined with the Moorpark LCR Contingency led to the original
2 Moorpark sub-area LCR need determination of 215 to 290 MW established in D.13-02-015.
3 Since D.13-02-015 was issued, in addition to the OTC unit retirements, the Mandalay 3 and
4 Ellwood units are assumed to be retired post-2020, adding to the LCR deficiency in the
5 Moorpark sub-area.⁸⁶ The CAISO also identified the most critical contingency for the Santa
6 Clara sub-area as the loss of the Pardee - Santa Clara 230 kV line followed by the loss of
7 Moorpark - Santa Clara 230 kV #1 and #2 lines, which could cause voltage collapse.⁸⁷
8 The Santa Clara sub-area includes the Mandalay OTC units, Mandalay 3, and Ellwood, which
9 are assumed to be retired post-2020, and the Las Flores Canyon Cogeneration Facility (Exgen)
10 that is assumed to be continually unavailable. In sum, with the contingencies and retirements in
11 the Santa Clara and Goleta areas of the Moorpark sub-area, new resources are needed to address
12 the deficiencies in the area post-2020. Specifically, the CAISO informed SCE that it needs the
13 new LCR resources online by June 1, 2021.

14 Based on the foregoing, in terms of selecting projects that can be online by
15 June 1, 2021, viability was a critical factor in meeting LCR needs and in SCE's selection
16 process. As discussed in Section V.A.2, this also resulted in SCE shortlisting approximately
17 three times the identified LCR energy need, which allowed SCE to include a reasonable number
18 of projects with high or reasonable project viability. It also allowed SCE to include offers with
19 lower viability with attractive pricing to the final evaluation round where each offer's viability
20 could be further assessed.

⁸⁶ Mandalay Generating Station Notice of Change in Long-Term Status of Generating Units, dated October 19, 2017; Ellwood Generating Station Notice of Change in Long-Term Status of Generating Unit, dated February 28, 2018.

⁸⁷ Appendix F, CAISO Documents, CAISO's 2023 Local Capacity Technical Analysis, Final Report and Study Results, dated May 15, 2018 (also available at <http://www.caiso.com/Documents/Final2023Long-TermLocalCapacityTechnicalReport.pdf>).

1 **4. Final Offer Evaluation Results**

2 a) Summary

3 (1) Quantitative Evaluation of Offers

4 A summary of the best final offers and their pricing that were
5 considered for a solution for the LCR need are summarized in Table VI-9 below. Each of the 89
6 final offers went through the evaluation process described in Section VI.A above. SCE ranked
7 all final offers by the selection metric, NPV/LCR MWh contribution, and used its LCBF
8 evaluation methodology when determining the best offers to select. As a result, SCE considered
9 offers with the best NPV and if possible, earlier online dates. By considering earlier online
10 dates, SCE would be in a better position to react to any potential project development-related
11 issues that could jeopardize the LCR solution being available by June 1, 2021. [REDACTED]

12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]

18 [REDACTED]. A summary of the offers considered are
19 summarized in Table VI-9.

Table VI-9
Final Offers Considered

Bidder Name (Project)	Solicitation	Location	Product	Interconnect	Capacity (Aug 2023 MW)	NPV (\$/LCR MWh)	NPV (\$/kW- month)	Avg. Price (\$/kW- month)	Notional Cost (\$MM)

(2) Qualitative Evaluation of Offers

With the least-cost ranking complete, SCE then considered the best-fit, or qualitative, attributes of each project in order to select a viable and feasible portfolio to meet the LCR need.

As explained above, special qualitative consideration was given to project viability. To address viability in a fair and logical manner, developers and projects were

1 studied and were attributed a score of either Higher Viability, Reasonable Viability, or Lower
2 Viability. The viability classification was based on five components, the first having the highest
3 weighted impact on the assessment: (1) reasonableness of COD; (2) developer experience;
4 (3) operation and maintenance experience; (4) technical feasibility; and (5) resource
5 sufficiency.⁸⁸ For a project to be classified as either Higher Viability or Reasonable Viability,
6 there had to be a reasonable expectation of a path forward to a June 1, 2021, or earlier, COD.

7 To assess the reasonableness that a project would be online by
8 June 1, 2021, in time to meet the LCR need, SCE assessed both the project's interconnection
9 path (when applicable)⁸⁹ and permitting path. To assess the interconnection path (when
10 applicable), SCE leveraged the latest interconnection study reports and analysis for each project.
11 As discussed previously, these reports are produced for both the WDAT queue cluster and ISP
12 interconnection processes. One component of this analysis was determining the interconnection
13 facilities, distribution upgrades, and network upgrades required to allow the project to transmit
14 energy. The installation schedule of the interconnection facilities and/or upgrades have a direct
15 impact on a project's COD.

16 For WDAT queue cluster interconnections, the in-service date for
17 each project ranges from very conservative to somewhat conservative depending on whether the
18 interconnection request is in Phase 1 or Phase 2. Phase 1 study reports contain very preliminary
19 interconnection facilities in-service date estimates that are based on predefined timelines for
20 distribution upgrades required for deliverability. In contrast, Phase 2 study report estimates for
21 interconnection facilities' in-service dates are more precise as the interconnection study is more
22 mature. During the LCR RFP, Phase 1 reports were utilized for QC11 and Phase 2 reports were
23 utilized for QC10 projects.

⁸⁸ Detailed description of the factors of the viability assessment is in Section VI.A.2.c.1.

⁸⁹ The WDAT queue cluster and ISP interconnection processes do not apply to behind-the-meter products, as these products are not required to enter into these interconnection processes.

1 For ISP interconnections, the system impact study report was used
2 to determine the interconnection facilities in-service date. At the time of final selection, [REDACTED]
3 projects interconnecting via the ISP process, including the selected Strata Satcoy project, had
4 fully executed generator interconnection (“GIA”) agreements that showed in-service dates well
5 in advance of the June 1, 2021 deadline, and [REDACTED]

6 [REDACTED].
7 The other online reasonableness consideration was permitting,
8 which became a specific focus for projects located in SOAR-zoned areas of Ventura County. As
9 discussed in Section V.A.3 above, SOAR is a voter-approved initiative that inhibits the
10 development of non-approved uses (*e.g.*, energy storage) in certain zoned areas of Ventura
11 County. Given that the timeline for obtaining an exemption or waiver from this restriction is
12 unknown at best, and not possible at worst, [REDACTED]

13 [REDACTED]⁹⁰ [REDACTED]

14 [REDACTED]

15 [REDACTED]⁹¹

16 (3) Charging Constraint Consideration

17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]

⁹⁰ See Table V.6 that includes the offers that withdrew from the LCR RFP due to SOAR permitting issues.

⁹¹ [REDACTED]

1 The RA with Put offer type provides [REDACTED] with the
2 decision to either retain the dispatch rights, and the resulting energy and ancillary service value,
3 or put the dispatch right to SCE on an annual basis. When the dispatch rights are put to SCE,
4 SCE is able to monetize the dispatch of the resource, but must also bear all of the risks that may
5 negatively impact the value that can be realized to SCE's customers. One component that can
6 negatively impact energy and ancillary service value is the charging constraints that can be
7 imposed through the interconnection process. At the time of final offer evaluation, [REDACTED]

8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED] Finally, charging constraints for a 10 MW
16 energy storage project located on a 12kV distribution circuit can be more severe as the charging
17 demands of the 10 MW energy storage system is very close to the maximum hosting capacity of
18 a 12kV distribution circuit.

19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 **5. Final LCR RFP Selection Portfolio**

24 The LCR RFP valuation resulted in SCE selecting the Strata Saticoy 100 MW
25 IFOM energy storage offer (see Table VII-11 below for details). The Strata Saticoy offer was
26 the sole final selected offer that only bid into the LCR RFP, meaning it did not bid into both the
27 LCR RFP and ACES 2 RFO; and as a result, the offer was selected through the LCR RFP.

a) LCR Solution Portfolio

To meet the identified LCR need, the LCR RFP and ACES 2 RFO valuations resulted in SCE selecting the offers in Table VI-10 below through both solicitations. SCE selected offers that total 162 MW LCR Capacity⁹²/195 Contract Capacity (power) and 647 LCR MWh/Contract 780 MWh⁹³ (energy).

The overall LCR portfolio results in a 10 MW buffer above the CAISO-defined capacity need in order to enhance the likelihood of a successful LCR portfolio in the event of a potential project failure, which poses a significant risk for the LCR RFP and ACES 2 RFO procurement because of the limited amount of time between offer selection and submission for Commission approval and the required COD of June 1, 2021. SCE's decision to provide for a 10 MW buffer is prudent for reliability purposes because if a project fails between April 2019 and June 2021 there is no time for additional procurement.

Table VI-10
Final Selection Set to Solve LCR Need

Bidder	Project	Resource Type	Location	Capacity (MW)	Average Capacity Price (\$/kW-mo)	Commercial Online Date	Regulatory Approval Mechanism
Swell	SC/G	BTM-DR	S & G	14		January 2021	ACES AL
E.ON	Painter	ES-RA Only	G	10		March 2021	ACES AL
Strata	Saticoy	ES-RA Only	S	100		December 2020	LCR Application
Able Grid	Silverstran	ES-RA Only	S	11		March 2021	ACES AL
Ormat	Vallecito	ES-RA Only	G	10		December 2020	ACES AL
AltaGas*	Goleta	ES-RA Only	G	40		December 2020	ACES AL
Enel	Hollister	ES-RA Only	G	10		March 2021	ACES AL

*

⁹² This value is based on the LCR MW and not the Contract MW. See Section VI.B.2 for a detailed discussion of an LCR MW.

⁹³ *Ibid.*

VII.

2018 LCR RFP SOLICITATION RESULTS

SCE seeks Commission approval through this application of one 100 MW contract with Strata Saticoy selected in the LCR RFP. Among the final offers in the LCR RFP, the selected contract had a [REDACTED] ranking and was competitively priced. Table VII-11 includes key terms of the selected contract. The executed contract is provided in Appendix B.

***Table VII-11
Contract Summary***

Line No.	Project	Strata Saticoy
1	Offer Number	550-03
2	Counterparty	Strata Saticoy, LLC
3	Technology	Lithium ion batteries
4	Rated Power Capacity (MW)	100MW (Net) / 104.5MW (Gross)
	Energy Duration (MWh)	400
5	Location	274 Beedy Street, Oxnard, CA 93036
6	Commercial Operation Date	12/1/2020
7	Contract Term (Years)	20
8	Notional Cost	[REDACTED]
9	A-Bank Substation	Santa Clara 220/66kV Substation
10	Energy Delivery Point	(New) Alisa 66/16kV Substation

A. Description of Selected Offer

SCE entered into a RA-only contract with Strata Saticoy for a 100 MW/400 MWh battery energy storage project located in Oxnard, California. The project will be owned by Strata Saticoy LLC (Strata Solar). Strata Solar is a utility-scale solar and energy storage developer based in Durham, North Carolina that has installed over 1.3 GW of solar capacity and has three GWh of energy storage capacity under development, including standalone and solar plus storage. A site map of the proposed project is provided in Figure VII-3 below.

Figure VII-3
Strata Saticoy Project Site Map



Under the RA-only agreement, the resource must bid into the CAISO market as an RA resource pursuant to the CAISO tariff. SCE is able to dispatch the resource up to 15 days per calendar year, allowing SCE to designate when the project will charge and discharge into the CAISO market on those days, thus enabling SCE to direct the use of the project for operational needs. Otherwise, SCE will not control the dispatch rights under the contract and does not receive any energy or Ancillary Service benefits.

The Strata Saticoy project has an executed GIA as of February 2, 2019. The interconnection point will be at a new single-breaker tap Alisa 66kV substation that connects to the Santa Clara-Gonzales 66kV line.

[REDACTED]

[REDACTED]⁹⁴ [REDACTED]

⁹⁴ CAISO grants FCDS to a project based on the following criteria: (1) the project should not trigger any deliverability network upgrades as determined via the CAISO deliverability analysis; and (2) the
(Continued)



1
2
3
4
5 **1. Contingencies and Milestones**

6 As outlined in the contract, the Strata Saticoy project must meet multiple project
7 milestones to fulfill its obligations under the RA-only contract. While many of these have been
8 met because Strata Saticoy has an executed GIA, it must still obtain all material permits to
9 initiate construction of the project and execute a purchase order for all of the project components,
10 including the battery packs and power conversion system. Moreover, the project also has
11 contractual requirements that must be adhered to in order to achieve the interconnection in-
12 service date. These requirements contain associated financial commitments that must be met.

13 Project developers, such as Strata, have expressed concerns about committing funds to
14 project and interconnection infrastructure construction prior to the project receiving CPUC
15 contract approval. Hence, critical path items to meeting the need date are contract approval and
16 the interconnection timeline for this project.

17 **2. Safety**

18 Among SCE's standard pro forma provisions, all PSAs include safety-related provisions
19 that require the seller's strict adherence to plan, construct, operate, and maintain the project
20 following professionally responsible practices that ensure safety throughout the life of a project.
21 Further, and also as a standard pro forma provision, prior to the commencement of any
22 construction activities, the seller is required to provide SCE with a report from an Independent
23 Engineer (acceptable to both SCE and the seller) certifying that the seller has a written plan for

Continued from the previous page

project should show commercial viability based on, among other measures, having been shortlisted in
a RFO or RFP process or having a regulator approved PPA.

1 the safe construction and operation of the project in accordance with Prudent Electrical
2 Practices.⁹⁵ The Strata Saticoy contract contains the aforementioned safety provisions.

3 **3. Interim Emissions Performance Standards**

4 The Strata Saticoy contract has no associated greenhouse gas emissions, and therefore the
5 emission performance standard does not apply.

⁹⁵ Per the contract, Prudent Electrical Practices means those practices, methods and acts that would be implemented and followed by prudent operators of electric energy storage facilities in the Western United States, similar to the Project, during the relevant time period, which practices, methods and acts, in the exercise of prudent and responsible professional judgment in the light of the facts known or that should reasonably have been known at the time the decision was made, could reasonably have been expected to accomplish the desired result consistent with good business practices, reliability and safety. Prudent Electrical Practices shall include, at a minimum, those professionally responsible practices, methods and acts described in the preceding sentence that comply with manufacturers' warranties, restrictions in this Agreement, WECC standards, and Applicable Laws. Prudent Electrical Practices also includes taking reasonable steps to ensure that: (a) Equipment, materials, resources, and supplies, including spare parts inventories, are available to meet the needs of the Project; (b) Sufficient operating personnel are available at all times and are adequately experienced and trained and licensed as necessary to operate the Storage Units properly and efficiently, and are capable of responding to reasonably foreseeable emergency conditions at the Project and transmission emergencies whether caused by events on or off the Site; (c) Preventive, routine, and non-routine maintenance and repairs are performed on a basis that ensures reliable, long term and safe operation of the Project, and are performed by knowledgeable, trained, and experienced personnel utilizing proper equipment and tools; (d) Appropriate monitoring and testing are performed to ensure equipment is functioning as designed; (e) Equipment is not operated in a reckless manner, in violation of manufacturer's guidelines or in a manner unsafe to workers, the general public, or the Transmission Provider's electric system or contrary to environmental laws, permits or regulations or without regard to defined limitations such as, flood conditions, safety inspection requirements, operating voltage, current, volt ampere reactive (VAR) loading, frequency, rotational speed, polarity, synchronization, and control system limits; and (f) Equipment and components are designed and manufactured to meet or exceed the standard of durability that is generally used for electric energy storage facilities operating in the Western United States and will function properly over the full range of ambient temperature and weather conditions reasonably expected to occur at the Site and under both normal and emergency conditions.

1 **VIII.**

2 **ALLOCATION OF BENEFITS AND COSTS**

3 **A. Overview**

4 The contract that is the subject of this Application is necessary to meet local reliability
5 needs for the benefit of all customers in SCE's distribution service area. Thus, D.14-03-004, the
6 LTPP Track 4 decision, instructs SCE to propose a cost allocation methodology for the resources
7 procured through its LCR solicitations:

8 Therefore, SCE and SDG&E shall allocate costs incurred as a result of
9 procurement authorized in this decision, and approved by the Commission. In
10 most cases we expect this allocation to be consistent with D.13-02-015 and the
11 CAM adopted in D.06-07-029, D.07-09-044, D.08-09-012 and D.11-05-005,
12 but there may be resources where an existing alternative method of allocating
13 resources costs may be preferred; for example, cost may be recoverable
14 through the Energy Program Investment Charge. As SCE states in its Reply
15 Comments on the Proposed Decision at 3, it will "propose an RA allocation
16 method in its application for approval of the results of its LCR RFO when
17 those results are fully understood." We will require that, in applications for
18 contract approval, the IOU shall recommend a method of cost allocation
19 appropriate for the resource being procured.⁹⁶

20 Pursuant to this requirement, SCE recommends a method of cost allocation for the Strata
21 Saticoy IFOM energy storage resource for which SCE is seeking approval. Table VIII-12 below
22 describes how SCE proposes to treat the Strata Saticoy IFOM energy storage resource from a
23 cost allocation perspective. A detailed description of how SCE plans to recover the costs of the
24 LCR resource, ratemaking treatment, and revenue allocation is contained in Chapter IX.

⁹⁶ D.14-03-004 (Track 4 decision) at 120.

Table VIII-12
LCR RFP Cost Allocation Methodology

		Balancing Account	Sub-Account	
Energy Storage				
ES – IFOM	1 Contract (Refer to Table VI-10)	LCRPBA	NSG Rate Component (CAM)	Since the contract is RA only and will not convey any market revenues to SCE, allocate the contract costs to all benefitting customers.

In D.15-11-041, the Commission approved SCE’s cost allocation methodology proposal for IFOM energy storage resources.⁹⁷ However, because the Stata Saticoy IFOM energy storage project is contracted to provide RA only, SCE is proposing a cost and benefit allocation to all benefitting customers that is consistent with an RA-only resource, as discussed below.

B. Allocation of Benefits and Costs

IFOM ES energy storage resources can participate directly in CAISO markets, similar to GFG resources. They are dispatchable and can provide both energy and Ancillary Services. However, the selected Strata Saticoy contract is an RA-only contract. An RA-only contract does not convey SCE the right to dispatch the resource or receive energy revenue from the resource. As such, SCE will not receive any market revenues from the CAISO for these contracts and the entire cost of the contract will be allocated to all benefitting customers. While there will not be market revenue benefits associated with this RA-only contract, the right to count such resources as RA against a compliance obligation will be allocated to all benefitting customers’ load serving entities through the RA program (in the form of a pro-rated reduction to each LSE’s RA requirements). Thus, consistent with prior CAM allocations, all costs and benefits will be allocated to all benefitting customers through SCE’s New System Generation (“NSG”) rate component, as described below.

⁹⁷ D.15-11-041 at 39 (OP 2).

1 IX.

2 **COST RECOVERY AND REVENUE ALLOCATION**

3 As discussed in Chapter VIII, SCE proposes to recover the costs of resources procured in
4 the LCR RFP through SCE's existing NSG rate component, consistent with previous LCR
5 contract ratemaking. The NSG rate component collects the costs of contracts and SCE-owned
6 peaker generation units that are subject to CAM. As discussed in more detail below, SCE is
7 establishing ratemaking to ensure that customers will only pay the assessed cost of the Strata
8 Saticoy contract.

9 **A. Cost Recovery**

10 SCE proposes to include in its annual Energy Resource Recovery Account ("ERRA")
11 Forecast proceeding a forecast of costs of the Strata Saticoy contract procured through the LCR
12 RFP that would be included in rates for the following year. This proposal is consistent with the
13 method by which SCE recovers its forecasted fuel and purchased power expenses. As explained
14 in more detail below, forecasted costs of the LCR RFP resource included in rates will be trued-
15 up to their assessed recorded costs through balancing accounts.

16 As explained above, SCE proposes to recover IFOM ES resource costs through the
17 existing NSG rate component. SCE recovers all of its new generation and certain CHP contracts
18 that the Commission has required all benefiting customers to pay for through the NSG rate
19 component. The calculation for determining the "benefiting costs" for these LCR resources is
20 described in Chapter VIII.

21 SCE's rate design proposal for recovery of LCR resource costs is discussed in the
22 Revenue Allocation and Rate Design Section below.

23 **B. Ratemaking**

24 SCE proposes recording the LCR resource costs to the existing LCR Products Balancing
25 Account ("LCRPBA"), which was approved in D.16-05-050. Each month, SCE will record the
26 actual cost of the LCR RFP resource in the NSG sub-account of the LCRPBA.

1 SCE proposes to transfer the balance of the NSG sub-account component of LCRPBA to
2 the existing NSG Balancing Account (“NSGBA”) each month. In the NSGBA, the cost of NSG
3 LCR-related costs and all other NSG costs will be balanced with the recorded NSG billed
4 revenues each month.⁹⁸ Any balance recorded in the NSGBA, either over- or under-collection, is
5 included in the NSG rates in the following year.

6 **C. Review of LCR RFP Costs**

7 D.13-02-015, the LTPP Track 1 decision, ordered the procurement of the resource
8 proposed for approval in this Application; and SCE procured the resource pursuant to its
9 Commission-adopted Moorpark LCR Procurement Plan. As such, if the Commission finds it
10 reasonable for SCE to enter into the Strata Saticoy contract at issue in this Application, there is
11 no further reasonableness review of SCE’s decision to enter into this contract. The only
12 reasonableness issue remaining will be the reasonableness of SCE’s administration of the Strata
13 Saticoy contract, which will be considered through SCE’s annual ERRA Review proceedings.

14 In the annual ERRA Review proceedings, SCE will include for Commission audit and
15 review all of the entries recorded in the LCRPBA to ensure that such entries are accurate and
16 compliant with the decision reached in this Application.

17 **D. Revenue Allocation & Rate Design**

18 This section describes the proposed allocation of costs associated with the Strata Saticoy
19 contract to individual rate groups. As discussed above, the costs of the LCR resource will be
20 recorded in the appropriate LCRPBA sub-account, and then transferred to the NSGBA. The
21 balance in this account will be allocated to the individual rate groups, consistent with the
22 functional revenue allocators adopted in SCE’s General Rate Case (“GRC”) Phase 2
23 proceedings. Table IX-13 illustrates changes to the average rate on rate group and system levels,
24 as a result of the expected annual capacity cost of the LCR RFP resource. The annual cost is

⁹⁸ As noted in Section VIII, the Strata Saticoy contract is RA-only, and thus will not generate any market revenues.

allocated across rate groups, using the appropriate allocators and methodology adopted in SCE's 2018 GRC Phase 2 (D.18-11-027⁹⁹). The prescribed factors and methodology will be used for revenue allocation until updated factors are adopted in SCE's 2021 GRC Phase 2 proceeding or related proceedings involving CAM allocations.

Table IX-13
Change in Class Average Rate on System Level

Bundled Average Rates (¢ / kWh)			
Rate Class	4/1/19	Proposed	Percentage Change
Residential	18.1	18.1	0.1%
GS-1	17.1	17.2	0.1%
TC-1	18.4	18.4	0.0%
GS-2	17.1	17.2	0.1%
TOU-GS-3	15.2	15.2	0.1%
Total LSMP	16.7	16.7	0.1%
TOU-8-SEC	13.7	13.7	0.1%
TOU-8-PRI	12.4	12.4	0.1%
TOU-8-SUB	8.5	8.5	0.1%
Total Large Power	11.9	11.9	0.1%
TOU-PA-2	14.1	14.2	0.0%
TOU-PA-3	12.0	12.0	0.0%
Total Ag.& Pumping	13.2	13.2	0.0%
Street Lighting	18.5	18.5	0.0%
TOU-8-SEC-S	14.9	14.9	0.1%
TOU-8-PRI-S	13.8	13.8	0.0%
TOU-8-SUB-S	8.5	8.5	0.1%
Total Standby	10.1	10.1	0.1%
Total	15.9	15.9	0.1%

⁹⁹ D.18-11-027 at 73 (OP 3).

1 **1. New System Generation Rate Component**

2 IFOM energy storage resource costs recovered through the NSG rate component
3 will be allocated to all benefiting customers based on the 12-month system coincident peak (“12-
4 CP”) allocators approved in SCE’s GRC Phase 2 proceedings. NSG revenues are recovered
5 through a cents-per-kWh energy charge.

Appendix A

Witness Qualifications and Confidentiality Declarations

SOUTHERN CALIFORNIA EDISON COMPANY
QUALIFICATIONS AND PREPARED TESTIMONY
OF ANTHONY R. HERNANDEZ

Q. Please state your name and business address for the record.

A. My name is Anthony R. Hernandez, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am Principal Manager of the Energy Contract Origination team in the Energy Procurement & Management Department at Southern California Edison Company. In this position, I lead a team responsible for the negotiation and execution of short-term, mid-term, and long-term structured energy procurement transactions and power purchase agreements (PPAs) on behalf of SCE's customers. I have held this position since October 30, 2017.

Q. Briefly describe your educational and professional background.

A. I hold a Master of Science in Engineering Management (Combined Master's degree: MBA & Industrial Engineering) and a Bachelor of Science in Electrical Engineering, both from California State Polytechnic University, Pomona. I am also a licensed Professional Electrical Engineer with the state of California, and a LEED® Accredited Professional. Prior to my present position, I have held many Senior Manager roles throughout SCE's Customer Service organization, with teams responsible for the successful management and implementation of various Demand Side Management (DSM) portfolios (e.g. Energy Efficiency, Demand Response, Distributed Generation, and Transportation Electrification), and various pricing and tariff offers (e.g. NEM, RES-BCT, GTSR). In addition to management roles described above which focused on program and offer administration, I was the Senior Manager of the Emerging Products organization, which developed and launched new DSM, Tariff, and Energy Management

1 products, tools, and offers. Lastly, I have held both Senior Manager, Engineering, and
2 Customer offer support roles in our Business Customer Division, working directly with
3 our non-residential customers to address their energy management goals and needs.

4 Q. What is the purpose of your testimony in this proceeding?

5 A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-01,
6 entitled *Testimony of Southern California Edison Company (U 338-E) in Support of Its*
7 *Application for Approval of Results of its 2018 Local Capacity Requirements Request for*
8 *Proposal (LCR RFP)*, as identified in the Table of Contents thereto.

9 Q. Was this material prepared by you or under your supervision?

10 A. It was prepared under my supervision.

11 Q. Insofar as this material is factual in nature, do you believe it to be correct?

12 A. Yes, I do.

13 Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best
14 judgment?

15 A. Yes, it does.

16 Q. Does this conclude your qualifications and prepared testimony?

17 A. Yes, it does.

DECLARATION OF ANTHONY HERNANDEZ REGARDING THE
CONFIDENTIALITY OF CERTAIN DATA

I, Anthony Hernandez, declare and state:

1. I am a Principal Manager of Contract Origination in the Power Supply organization at Southern California Edison Company ("SCE"). I was responsible for overseeing SCE's 2018 Local Capacity Requirements ("LCR") Request for Proposals ("RFP"). As such, I have reviewed SCE's Application seeking California Public Utilities Commission ("Commission" or "CPUC") approval of the results of its LCR RFP, and supporting Appendices. I make this declaration in accordance with Decisions ("D.") 06-06-066 and D.08-04-023, issued in Rulemaking ("R.") 05-06-040, and D.13-10-040 issued in R.10-12-007. I have personal knowledge of the facts and representations herein and, if called upon to testify, could and would do so, except for those facts expressly stated to be based upon information and belief, and as to those matters, I believe them to be true.

2. Listed below is the data in the Application, supporting Testimony and Appendices for which SCE is seeking confidential protection and the categories of the Matrix of Allowed Confidential Treatment Investor Owned Utility Data ("Matrix") appended to D.06-06-066 to which these data correspond.

Data	Location	Matrix Category	Period of Confidentiality
Testimony of Southern California Edison Company in Support of Its Application for Approval of the Results of Its 2018 Local Capacity Requirements Request for Proposals	Chapter V, Section A.1 (page 36, Table V-5); Section A.2 (page 37, line 7); Section A.3 (page 38, Table V-6); Section A.4 (page 40, Table V-7, lines 2-3)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
	Chapter VII (page 57, line 5, Table VII-11)	VII.B Contracts and power purchase	Contracts confidential for three years, or until one year following

	Chapter VII, Section A (page 58, lines 9-12; page 59, lines 1-4)	<p>agreements between utilities and non-affiliated third parties (except RPS)</p> <p>VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids</p> <p>VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)</p> <p>VIII.A Bid Information</p>	<p>expiration, whichever comes first.</p> <p>Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.</p> <p>Contracts confidential for three years, or until one year following expiration, whichever comes first.</p> <p>For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.</p>
LCR RFP Contract	Confidential Appendix B	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Contracts confidential for three years, or until one year following expiration, whichever comes first.
Independent Evaluator Report	Confidential Appendix C of Independent Evaluator Report (Confidential/Public Appendix C of Application)	VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties	Contracts confidential for three years, or until one year following expiration, whichever comes first.

		(except RPS)	
		VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
		VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.

3. SCE is complying with the limitations on confidentiality specified in the Matrix that pertain to the data listed in the table above.

4. I am informed and believe and thereon allege that the data in the table in paragraph 2 above cannot be aggregated, redacted, summarized, masked, or otherwise protected in a manner that would allow partial disclosure of the data while still protecting confidential information.

5. I am informed and believe and thereon allege that the data in the table in paragraph 2 and above has never been made publicly available.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 22, 2019, at Rosemead, California.

/s/ Anthony Hernandez
Anthony Hernandez

SOUTHERN CALIFORNIA EDISON COMPANY
QUALIFICATIONS AND PREPARED TESTIMONY
OF JONATHAN YUEN

Q. Please state your name and business address for the record.

A. My name is Jonathan Yuen, and my business address is 3 Innovation Way, Pomona, California 91768.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I'm a Power Systems Planner for the Transmission and Distribution (T&D) Integrated System Planning group of Southern California Edison (SCE). My responsibilities include assessing the electric system and developing technical solutions to ensure the performance of SCE's bulk power system is in compliance with applicable reliability standards and criteria.

Q. Briefly describe your educational and professional background.

A. I received a Bachelors of Science degree in electrical engineering from California Polytechnic State University, San Luis Obispo. I have ten years of experience with SCE, all with the Integrated System Planning group, performing technical assessments, supporting the regulatory approval and execution of transmission projects, and providing technical support to SCE resource procurements.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-01, entitled *Testimony of Southern California Edison Company (U 338-E) in Support of Its Application for Approval of Results of its 2018 Local Capacity Requirements Request for Proposal (LCR RFP)*, as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

1 Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best
2 judgment?

3 A. Yes, it does.

4 Q. Does this conclude your qualifications and prepared testimony?

5 A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY
QUALIFICATIONS AND PREPARED TESTIMONY
OF MICHAEL EAST VIRAG FREEMAN

Q. Please state your name and business address for the record.

A. My name is Michael East Virag Freeman, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I'm a Senior Advisor in the Power Supply's Portfolio Planning & Analysis department (PPA) of Southern California Edison (SCE). My responsibilities include leading and overseeing SCE's offer evaluation and selection processes for various supply side and distributed energy resources procurement activities.

Q. Briefly describe your educational and professional background.

A. I have 8 years of experience valuing utility scale and distributed energy resources projects. I have supported all of SCE's procurement activities of energy storage resources and have been involved in solicitations from the 2013 LCR RFO to SCE's IDER RFO. I received a Bachelor's degree in Mathematics from Chapman University in Orange, CA and a Master of Science degree in Applied Mathematics from California Polytechnic State University, Pomona.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-01, entitled *Testimony of Southern California Edison Company (U 338-E) in Support of Its Application for Approval of Results of its 2018 Local Capacity Requirements Request for Proposal (LCR RFP)*, as identified in the Table of Contents thereto.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

1 Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best
2 judgment?

3 A. Yes, it does.

4 Q. Does this conclude your qualifications and prepared testimony?

5 A. Yes, it does.

DECLARATION OF MICHAEL EAST VIRAG FREEMAN REGARDING THE
CONFIDENTIALITY OF CERTAIN DATA

I, Michael East Virag Freeman, declare and state:

1. I am a Senior Advisor in the Portfolio Planning & Analysis department of Southern California Edison's ("SCE's") Power Supply organization. I was responsible for overseeing the valuation process for SCE's 2018 Local Capacity Requirements ("LCR") Request for Proposals ("RFP"). As such, I have reviewed SCE's Application seeking California Public Utilities Commission ("Commission" or "CPUC") approval of the results of its LCR RFP, and supporting Appendices. I make this declaration in accordance with Decisions ("D.") 06-06-066 and D.08-04-023, issued in Rulemaking 05-06-040, and D.13-10-040 issued in R.10-12-007.

I have personal knowledge of the facts and representations herein and, if called upon to testify, could and would do so, except for those facts expressly stated to be based upon information and belief, and as to those matters, I believe them to be true.

2. Listed below are the data in the Application, supporting Testimony and Appendices for which SCE is seeking confidential protection and the categories of the Matrix of Allowed Confidential Treatment Investor Owned Utility Data ("Matrix") appended to D.06-06-066 to which these data correspond.

Data	Page	Matrix Category	Period of Confidentiality
Testimony of Southern California Edison Company in Support of Its Application for Approval of the Results of Its 2018 Local Capacity Requirements Request for Proposals	Chapter VI, Section A.2(a)(4) (page 43, line 23)	VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.
	Chapter VI, Section B.1. (page 47, lines 7-10)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public

	Chapter VI, Section B.4(a)(1) (page 51, lines 11-18; page 52, Table VI-9)	VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	after final contracts submitted to CPUC for approval. Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.
		VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
	Chapter VI, Section B.4(a)(2) (page 54, lines 2, 5-6, 12-15, 17-22, fooonote 91; page 55, lines 1, 7-15, 19-22)	VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.
		VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.
	Chapter VI, Section B.5(a) (page 56, Table VI-10)	VIII.A Bid Information	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval.

		VII.B Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Contracts confidential for three years, or until one year following expiration, whichever comes first.
2018 LCR RFP Workpapers	Confidential Appendix G	VIII.A Bid Information VIII.B Specific quantitative analysis involved in the scoring and evaluation of participating bids	For bid information, total number of projects and megawatts bid by resource type public after final contracts submitted to CPUC for approval. Specific quantitative analysis involved in the scoring and evaluation of participating bids confidential for three years after winning bidders selected.

3. SCE is complying with the limitations on confidentiality specified in the Matrix that pertain to the data listed in the table above.

4. I am informed and believe and thereon allege that the data in the table in paragraph 2 above cannot be aggregated, redacted, summarized, masked, or otherwise protected in a manner that would allow partial disclosure of the data while still protecting confidential information.

5. I am informed and believe and thereon allege that the data in the table in paragraph 2 above has never been made publicly available.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 22, 2019, at Rosemead, California.

/s/ Michael Freeman
Michael Freeman

SOUTHERN CALIFORNIA EDISON COMPANY
QUALIFICATIONS AND PREPARED TESTIMONY
OF ERIC LITTLE

Q. Please state your name and business address for the record.

A. My name is Eric Little, and my business address is 2244 Walnut Grove Avenue,
Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am the Manager of CAISO and GHG Markets within Regulatory Affairs at Southern California Edison. My transition to this position came about through a re-organization of responsibilities on November 3, 2014. Immediately prior to taking my current position, I was the Manager of Procurement and Resource Planning Policy within Regulatory Affairs for Southern California Edison. Within the prior position, I was responsible for developing policy positions associated with the procurement of generating resources to serve both bundled load needs as well as to meet system and local reliability needs. I held this position from January 23, 2012 through November 2, 2014.

Q. Briefly describe your educational and professional background.

A. I hold a Bachelor of Arts in Economics from California State University, Long Beach, and a Masters in Economics from the University of California, Santa Barbara. Prior to my current position, I have had a variety of responsibilities associated with Southern California Edison's Power Procurement organization. These have included development and support of Long-term Procurement Plan Proceedings, Resource Adequacy Proceedings, and development of California Independent System Operator market designs including the Market Redesign and Technology Update. Within these roles, among other responsibilities, I have been responsible for policy development of rules for all Load Serving Entities that provide for equal treatment of all customers. In addition, I have previously provided testimony regarding revisions to the Cost Allocation

1 Methodology (“CAM”) to calculate net costs for battery storage. These changes were
2 necessary to account for both the charging and discharging nature which had not been
3 considered previously as CAM had not been applied to storage resources.

4 Q. What is the purpose of your testimony in this proceeding?

5 A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-01,
6 entitled *Testimony of Southern California Edison Company (U 338-E) in Support of Its*
7 *Application for Approval of Results of its 2018 Local Capacity Requirements Request for*
8 *Proposal (LCR RFP)*, as identified in the Table of Contents thereto.

9 Q. Was this material prepared by you or under your supervision?

10 A. Yes, it was.

11 Q. Insofar as this material is factual in nature, do you believe it to be correct?

12 A. Yes, I do.

13 Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best
14 judgment?

15 A. Yes, it does.

16 Q. Does this conclude your qualifications and prepared testimony?

17 A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY
QUALIFICATIONS AND PREPARED TESTIMONY
OF ROBERT A. THOMAS

Q. Please state your name and business address for the record.

A. My name is Robert Thomas, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company.

A. I am Manager of the Rate Design Group in the Regulatory Affairs Department at Southern California Edison Company. In this position, I am responsible for development of SCE's rate designs. I have held this position since November 20, 2006.

Q. Briefly describe your educational and professional background.

A. I hold a Bachelor's of Science and Engineering from the University of Arizona, a Masters in Business Administration from California State Polytechnic University, Pomona, and a Professional Engineering License in Mechanical Engineering. Prior to my present position, my responsibilities have included Manager of the Analysis and Program Support Group, within SCE's Business Customer Division, where I was responsible for providing customer specific rate and financial analyses involving self-generation, load growth, contract rates, and hourly pricing options. Prior to this position, I was the SCE's Program Manager for the Self Generation Incentive Program. In this position, I was responsible for all aspects of the program to include dispute resolution, processing applications, program promotion and was SCE's lead representative on the Working Group.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-01, entitled *Testimony of Southern California Edison Company (U 338-E) in Support of Its Application for Approval of Results of its 2018 Local Capacity Requirements Request for Proposal (LCR RFP)*, as identified in the Table of Contents thereto.

- 1 Q. Was this material prepared by you or under your supervision?
- 2 A. Yes, it was.
- 3 Q. Insofar as this material is factual in nature, do you believe it to be correct?
- 4 A. Yes, I do.
- 5 Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best
- 6 judgment?
- 7 A. Yes, it does.
- 8 Q. Does this conclude your qualifications and prepared testimony?
- 9 A. Yes, it does.

SOUTHERN CALIFORNIA EDISON COMPANY
QUALIFICATIONS AND PREPARED TESTIMONY
OF MATTHEW D. SHERIFF

Q. Please state your name and business address for the record.

A. My name is Matthew David Sheriff, and my business address is 2244 Walnut Grove Avenue, Rosemead, California 91770.

Q. Briefly describe your present responsibilities at the Southern California Edison Company (SCE).

A. I am currently Senior Advisor in SCE's CPUC Revenue Requirements and Tariffs Department. As such, I am primarily responsible for preparation of SCE's Cost Recovery showing and forecasting SCE's revenue requirements and system average rate.

Q. Briefly describe your educational and professional background.

A. I graduated from the University of Maryland Baltimore County in May of 1995 with a Bachelors of Arts Degree in Political Science. For the next seven years I worked at several venture-backed new media startups in marketing and business development roles. In August of 2004 I earned a Master of Business Administration (MBA) degree from the University of Southern California with an emphasis on Corporate Finance. After graduation, I worked for Raytheon Inc. as a senior financial analyst responsible for balance sheet and cash flow forecasting. In April of 2007, I joined Southern California Edison Company as Senior Financial Analyst in the Financial Planning and Analysis group of the Treasurer's department. In this role as a financial subject matter expert, I prepared cost-effectiveness analysis in support of applications before the CPUC, including SmartConnect®, SONGS High Pressure Turbine and the sale of SCE's interest in Four Corners. I was promoted to senior project manager while in this department. I started in my current position in January of 2014. I have previously testified before the California Public Utilities Commission.

Q. What is the purpose of your testimony in this proceeding?

1 A. The purpose of my testimony in this proceeding is to sponsor portions of Exhibit SCE-01,
2 entitled *Testimony of Southern California Edison Company (U 338-E) in Support of Its*
3 *Application for Approval of Results of its 2018 Local Capacity Requirements Request for*
4 *Proposal (LCR RFP)*, as identified in the Table of Contents thereto.

5 Q. Was this material prepared by you or under your supervision?

6 A. Yes, it was.

7 Q. Insofar as this material is factual in nature, do you believe it to be correct?

8 A. Yes, I do.

9 Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best
10 judgment?

11 A. Yes, it does.

12 Q. Does this conclude your qualifications and prepared testimony?

13 A. Yes, it does.